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Air Conditioning & Refrigeration News

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ALL-INDUSTRY SHOW IN CHICAGO, JAN. 13-16

Dealers Rebuild Trade-In Jobs, Survey Shows

Used Refrigerators Now Taken In Needn't Be Junked

PHILADELPHIA—A more noticeable tendency to re-build traded-in electric refrigerators is to be noted in the second annual survey made by Associated Refrigerator Plant, Inc. of this city, of the first 2,500 trade-in boxes received by the plant in its business year.

Associated Refrigerator Plant specializes in reconditioning traded-in models for refrigerator dealers, and its proprietors are also the publishers of the "Blue Book of Refrigerator Trade-Ins." The survey is presented in the chart published on this page.

Reasons for the increase in the percentage of the total number of trade-ins which were rebuilt in the plant are advanced as follows:

(1) Most of the very early models have already been traded and junked. This year later models are being introduced into the trade-in field. These later models have units built after advances in engineering and design had been made, and thus are more adaptable for rebuilding.

(2) The Blue Book assigns "zero"

(Concluded on Page 36, Column 1)

Copeland Hermetic Line Serviceable

SIDNEY, Ohio—A new line of "serviceable-hermetic" refrigerating units claimed to combine the advantages of both the open and welded-in types has been announced by Copeland Refrigeration Corp.

Known as the "Copelametic," this new unit is said to be completely field serviceable. Belts, seals, and manual motor oiling—the three chief causes of service—have been entirely removed, and field adjustment or replacement of any part has been made possible.

Copelametic models are available for self-contained and remote installation from ⅛ to ½ hp. Single cylinder units are powered by ⅜, ⅛, ⅛, and ¼-hp. motors. Twin cylinder models have ¼, ⅓, and ½-hp. motors. Piston stroke is identical in all compressors, but bore is varied to load the motor at low,

(Concluded on Page 18, Column 4)

Barlow & Seelig Co. Settles Petrie Suit

CINCINNATI — The suit brought by R. I. Petrie, former president and general manager of Barlow & Seelig Mfg. Co., Ripon, Wis., manufacturer of washers and ironers, against that corporation has been settled out of court, according to information received here.

In the suit, Mr. Petrie, who is now general sales manager of Crosley Corp., had asked for $32,419, which he alleged was due him in salary and percentage of the company's consolidated net income for 1939 and 1940. During 1939, Barlow & Seelig profits increased from $67,000 to more than $200,000, it was claimed while a subsidiary, American Ironing Machine Co., showed a profit of more than $20,000 in the same year.

'We'll Stand Pat,' Say Chicago's Big Department Stores

By T. T. Quinn

CHICAGO—With a year of new refrigerator sales records behind them, the managers of three of Chicago's largest-volume department store operations plan no major changes in their 1941 appliance selling set-up.

All three department stores—the Boston Store, the Fair, and Marshall Field & Co.—went well over the top in refrigeration this year on nationally advertised lines, and they're not planning a change in their promotional efforts next year. If anything, they'll be in there hitting harder on the lines they now handle.

Only one of the three—the Boston Store—carries a private brand, and this, the "Arctic Queen," is a "regular" of several years' standing and has a considerable following among the store's patrons. The other two haven't had private brands for some time, and with prices at their present level plan to string along with "name" lines on which they already have worked up a volume business.

Few lines, rather than many, was the stores' policy this year, and it was indicated this would continue to

(Concluded on Page 35, Column 1)

Locker Plants Top ASRE Program

NEW YORK CITY—Locker plants and their future possibilities will come up for a "big inning" during the thirty-sixth annual meeting of American Society of Refrigerating Engineers in the Hotel Commodore here Dec. 3 to 5.

The session on locker plants is one of two informal conferences which have been scheduled for the three-day get-together, the other being devoted to air conditioning operation. At the latter session, some of the common criticisms and operating problems of large-size cooling plants will be outlined by engineers who have specialized in this type of work.

Locker plant conference will probe the economic status of this business, the potential market for such a service particularly in the eastern section of the country, and newest designs in equipment for this field.

(Concluded on Page 2, Column 2)

Koch Gets Contract for 893 Army Refrigerators

NORTH KANSAS CITY, Mo.—Contracts for 893 commercial refrigerators for use in U. S. Army cantonments, said to be among the largest for this type of equipment yet made in connection with the national defense program, have been awarded to Koch Refrigerators here, officials of the company declare.

The contracts include one for 593 mechanical refrigerators (Koch standard models 7643 and 7665), and another for 300 commercial-type ice refrigerators. Total value of the contracts is said to be in the neighborhood of $250,000.

The 593 mechanical units will go to Fort Blanding, near Jacksonville, Fla., where 65,000 troops are to be stationed. The order is said to mark the first use of mechanical refrigeration by a large army cantonment in the country.

Most of the refrigerators will be delivered to training camps in Florida by the first of the year, it is reported.

What This Issue Is All About

A goodly share of the editorial content of this issue and much of the advertising is concerned with the Third Annual All-Industry Refrigeration and Air Conditioning Exhibition.

One of the reasons why so much space is devoted to telling about the Exhibition is that this issue is reaching, in addition to the subscribers of the News, many others who might be interested in attending the Show but who would not be likely to hear about it.

Another reason is that Air Conditioning & Refrigeration News, which proposed the idea of an All-Industry Exhibition, wishes to lend full support to the Show. We sincerely believe that all who attend will be highly repaid for their expenditure of time and money.

Air Conditioning Association Plans Chicago Meeting

By Henry Knowlton

NEW YORK CITY—The National Air Conditioning Association will hold its annual convention at the Blackstone hotel, Chicago, Jan. 13-15, concurrently with the Third All-Industry Refrigeration & Air Conditioning Exhibition, according to a recent announcement by Jesse W. Page, Jr., president.

The association has established headquarters at 220 East 42nd St. here, with Arthur F. Callahan as executive secretary, subject to the approval of the members meeting in Chicago.

At the same time Mr. Page announced the appointment of A. C. Buensod of Buensod-Stacey, Inc. as treasurer of the association, to fill

(Concluded on Page 6, Column 1)

Here He Is!

M. W. "MEL" KNIGHT

General sales manager, Peerless of America, Inc., and chairman of the All-Industry Refrigeration Exhibition Committee.

Birds Eye To Allow Dealers To Buy Any Approved Food Case

NEW YORK CITY — Departing from its established policy of permitting the merchandising of Birds Eye frosted foods only from the one make of low-temperature cabinet which it leased to the retailer, Frosted Foods Sales Corp., which handles national sales of the Birds Eye brand, now allows the retailer to use any "approved" make of cabinet and to buy this cabinet instead of leasing it, if he so desires.

For the past five years the Frosted Food Sales organization has been purchasing low-temperature cases manufactured by American Radiator Co. and leasing these cases to Birds Eye retailers for a period of from three to four years, at the end of which time the leases were renewable for a like period. This has been the

(Concluded on Page 2, Column 5)

Here's Why You Should Attend The All-Industry Exhibition

What is the All-Industry Refrigeration and Air Conditioning Exhibition? Why is it held and why should you—a dealer, service man, engineer, refrigeration supply jobber, or manufacturing executive take a week off and travel many miles to see it?

Those who sponsor the show and exhibit at it do so because they feel that the show performs a service to their customers, by enabling them to see the year's new lines of products in one place, under favorable conditions, and before the season is well underway.

To the man in the field or factory who makes use of the items exhibited at the All-Industry Exposition the show offers the following benefits:

1. It affords him an opportunity to inspect probably all of the products he will buy to use or resell in the course of the year, to compare them, and to discuss them with the men who are responsible for their design and development.

2. Opportunity is afforded the dealer, contractor, or engineer to check new or different products with which he can expand his business.

3. The individual attending the exhibition can compare notes with men from all parts of the country whose business or line of work is similar to his.

4. He can acquire much valuable knowledge from the meetings that are held in conjunction with the exposition, and from the educational material that is presented at many of the booths.

5. He will have a good time, be royally treated—in fact, in

(Concluded on Page 27, Column 1)

Exhibits Already Surpass Record For Other Years

Main Hall at Stevens Filled; Many Booths On Mezzanine

CHICAGO—With a total of 175 exhibit spaces already sold, the Third All-Industry Refrigeration & Air Conditioning Exhibition Jan. 13 through Jan. 16 in the Stevens hotel here will be by far the industry's greatest show. At the last All-Industry Exhibition 120 exhibit spaces were taken.

The All-Industry Exhibition will be on two exhibit floors in the Stevens for the first time. In addition to filling the Stevens exhibition hall, there will be exhibits on the mezzanine and in the Boulevard room, which are directly above the main lobby.

Registration booth for the Exhibition will be located at the main entrance of the lobby floor of the Stevens (Michigan Ave. entrance) at the foot of the stairs which is the entrance to the mezzanine floor displays, this being immediately adjacent to the two East entrances to the exhibition hall.

Attendance at the 1939 Exhibition was 6,274 (registered), while the registrants at the 1940 affair totaled 7,554. Those in charge of the show hope that upwards of 10,000 will be on hand this coming January.

The Refrigeration Service Engineers Society, the National Air Conditioning Association, and the National Refrigeration Supply Jobbers Association will hold their annual conventions at the Stevens hotel during the week of the show. The American Society of Refriger-

(Concluded on Page 4, Column 1)

Contract Discloses Big Use of Cooling At Army Airfields

OMAHA, Neb.—A $130,000 contract for refrigeration and air conditioning equipment for U. S. Air Corps technical buildings at Albrook Field in the Panama Canal Zone has been awarded to Baker Ice Machine Co. Albrook Field is on the Pacific side of the Canal, adjacent to Balboa, which is directly below the site of Fort Clayton.

Buildings included in the contract at the field are the Air Corps depot supply building, the equipment repair building, the engine test building, and the engine repair shop.

This is the second Air Corps contract received by Baker in recent weeks. The first was the depot supply building at Hill Field, Ogden, Utah, and included equipment for

(Concluded on Page 26, Column 5)

Crocker, Coolidge Made G-E Vice Presidents

SCHENECTADY, N. Y.—Appointment of Stuart M. Crocker and Dr. W. D. Coolidge as vice presidents of General Electric has been announced by Charles E. Wilson, president of the company.

Mr. Crocker will relinquish his duties as manager of the company's

(Concluded on Page 2, Column 1)

Andrews Will Manage G-E Cooling Depts.

(Concluded from Page 1, Column 5)
air conditioning and commercial refrigeration department in Bloomfield, N. J., to make his headquarters in New York City, where he will cooperate with and be assisted by all commercial departments in furthering the general interests of the company.

H. L. Andrews, General Electric vice president in charge of the company's appliance and merchandise department, will add management of the air conditioning and commercial refrigeration department to his present duties.

Dr. Coolidge will continue as director of the General Electric Research Laboratory here.

Mr. Crocker has been manager of the air conditioning and commercial refrigeration department since May, 1939, and a vice president of International General Electric Co. since 1930. During 1938 he served as assistant to Mr. Wilson.

Conferences on Locker Plants, Air Conditioning To Highlight 36th Annual ASRE Meeting

(Concluded from Page 1, Column 2)
Both conferences are scheduled for the afternoon of Dec. 3, first day of the meeting.

Discussion leaders at the locker session will include Danner Bierhaus, Emil Steinhorst & Sons; Paul Christensen of Merchants Refrigerating Co.; and Mrs. H. B. Pownall, locker plant manager, while the conference on air conditioning will hear A. S. Henry, Radio-Keith-Orpheum Corp.; L. E. Kelley, Tiffany & Co.; C. W. Walton, Jr., Rockefeller Center; Dr. John Parsons, and A. C. Buensod.

A practical approach to current refrigeration and air conditioning problems will feature the entire technical program of the meeting. At the morning session on Dec. 3, Dr. Mary E. Pennington, consulting engineer, will discuss "Frozen Food Containers"; Prof. B. H. Jennings, Northwestern University, will talk on "Refrigeration in the Colleges"; and K. F. Warner, U. S. Department of Agriculture, will outline "Freezing of Meats."

Following the informal conferences that afternoon, a smoker-cocktail party will be given in honor of members and officers of new A.S.R.E. sections in Richmond, Pittsburgh, Cincinnati, Cleveland, and Kansas City.

Technical program on Dec. 4 will include discussions of "Personnel Problems in the National Defense Program," by T. A. Armstrong of Westinghouse; "Aluminum in Refrigerating Equipment," by Robert B. Mears of Aluminum Co. of America; and "Vibration Isolation," by J. G. Aldinger and E. T. P. Neubauer of York Ice Machinery Corp.

An inspection trip to North Beach Airport and La Guardia Field is scheduled for the second afternoon of the meeting, with the annual A.S.R.E. dinner-dance to follow at the Commodore.

Final technical session, on the morning of Dec. 5, will open with a discussion of "Silver Brazing Alloys in the Household Refrigeration Field," by Leo Edelson of Handy & Harman. David Crampton, Wallace & Tiernan Co., will talk on "Heat Interchangers," and A. R. Dennington of the Westinghouse lamp division will follow with a paper on "High Humidity in Commercial Refrigerators."

The session will close with an outline of the status of safety laws in various parts of the United States, by C. F. Brooks of National Electrical Manufacturers Association.

Members of the convention entertainment committee are: Cecil Boling, chairman; C. R. Logan, George I. Boone, E. R. Fitzgerald, Otto Z. Klopsch, J. T. Schaefer, R. H. Tull, D. D. Wile, and E. W. McGovern. Women's entertainment committee has Mrs. George E. Hulse as chairman; with Mrs. C. R. Logan, Mrs. W. R. Hainsworth, Mrs. J. F. Stone, Mrs. Crosby Field, Mrs. Gardner Poole, Mrs. A. M. Fenwick, and Mrs. F. C. Stewart as other members of the group.

There Is No Substitute For Experience

THE PROGRESS OF SERVEL REFRIGERATION

IN 1921 Servel built the first Methyl Chloride machine ever offered for sale in the United States.

IN 1921 Servel built the first compressor having a "sealed" crankcase to prevent oil slugging.

IN 1924 Servel built the first low-pressure refrigerating machine larger than ½ HP.

IN 1926 Servel developed the first crankshaft seal using refrigerant pressure instead of spring pressure for its sealing force.

IN 1929 Servel introduced the first machine having a test cock for quick check of refrigerant charge.

IN 1930 Servel developed the first shrouded condenser and "Streamair" fans.

IN 1932 Servel introduced counter-flow water-cooled condensers with separate receivers.

IN 1932 Servel developed a low-differential water control and condenser check valve to prevent water wastage.

IN 1932 Servel introduced "Humidraft," the pioneer in forced convection for food storage.

IN 1933 Servel introduced pump-forced lubrication on large models.

IN 1935 Servel built the first units with precision-type copper-lead bearings.

IN 1939 Servel offered the first full line of ½ HP. to 20 HP. models with four- and eight-cylinder compressors.

IN 1941 Servel invites you to visit its booth at the ALL-INDUSTRY SHOW to see the finest developments in the industry!

1921-1941

20 Years of Leadership!

A MAJOR PART of the basic designs used in the low-pressure refrigeration industry today have been developed by Servel engineers.

As a result, Servel users have enjoyed the benefits of improved design for two to five years ahead of competition.

And, through all these years, Servel dealers and distributors have earned extra profit through lower selling costs, lower service costs, and greater user satisfaction.

Servel's equitable sales policies protect every customer in his own field.

A request on your letterhead will bring details. Write today to Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Indiana.

SERVEL

COMMERCIAL REFRIGERATION AND AIR CONDITIONING

Birds Eye To Allow Dealers To Buy Any Approved Food Case

(Concluded from Page 1, Column 4)
only means provided for the retailing of Birds Eye foods.

Under the new set-up, however, any store accepted as an authorized Birds Eye outlet is privileged to decide for itself whether it will lease or purchase outright the American Radiator cases made available by Frosted Foods Sales Corp., or whether it will instead buy some other type of approved equipment. Only stipulation is that such other cases must operate efficiently and maintain a uniform temperature of not more than 8° above zero F.

Another important change has been made in the Birds Eye price policy. Prior to the first of this year, Frosted Foods Sales Corp. had always provided Birds Eye dealers with monthly price lists which included dealer's cost and suggested selling price. With few exceptions, all stores followed these suggested selling prices, and it was possible for the Frosted Foods Sales firm to advertise price and be pretty sure that the consumer, whether in Philadelphia or Kansas City, would be able to buy Birds Eye products at this definite advertised price.

With the expansion of its retail operation, however, the Frosted Foods Sales organization decided to let the distributors and dealers decide for themselves the cost and selling prices. This change made it possible for dealers to take advantage of local conditions by running their own "specials," and to make every effort to build a larger volume of sales by working on a slimmer margin of profit.

Frosted Foods Sales is backing up its distributors and dealers with an enlarged program of advertising and sales promotion. National advertising is being run weekly in Life and Collier's, the advertisements alternating in these two publications. A tremendous amount of consumer education is still a requisite to the successful merchandising of frozen foods, and Frosted Foods Sales is endeavoring to give its dealers the kind of material that will help them most in this task.

Any store taken on as a Birds Eye outlet, regardless of the kind of equipment installed, agrees to sell only Birds Eye frozen foods, and not any competitive brands. This restriction makes it possible for Frosted Foods Sales Corp. to provide its authorized outlets with a complete sales promotional program.

Although the Frosted Foods Sales company has opened up its case policy, it still limits the number of stores which can be opened each year. In other words, the company emphasizes, it is still selling foods, not cases. Expansion of the company's retail selling organization is measured for the most part by its ability to increase plant production.

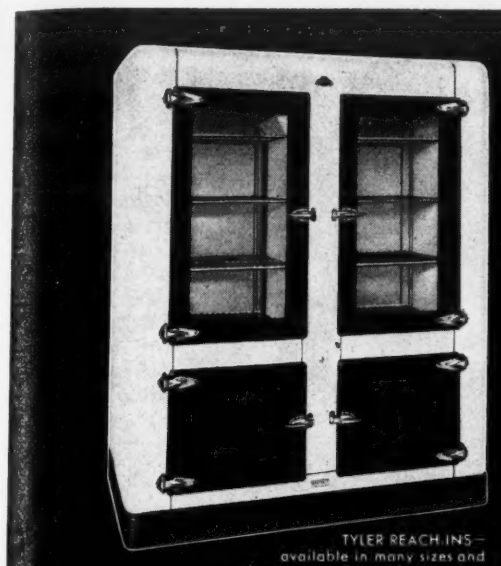
At the present time Frosted Foods Sales Corp. has a total of 8,700 authorized retail outlets for Birds Eye foods, but it expects to add another 1,000 stores before the end of this year. Further expansion of the company's production and retail distribution is expected to push this number of retail outlets to 11,500 stores by June, 1941.

Mel Knight Names District Managers For Peerless

CHICAGO—Appointment of B. W. Henn and T. C. Bickel to new posts in the Peerless of America, Inc. field organization has been announced by M. W. Knight, general sales manager.

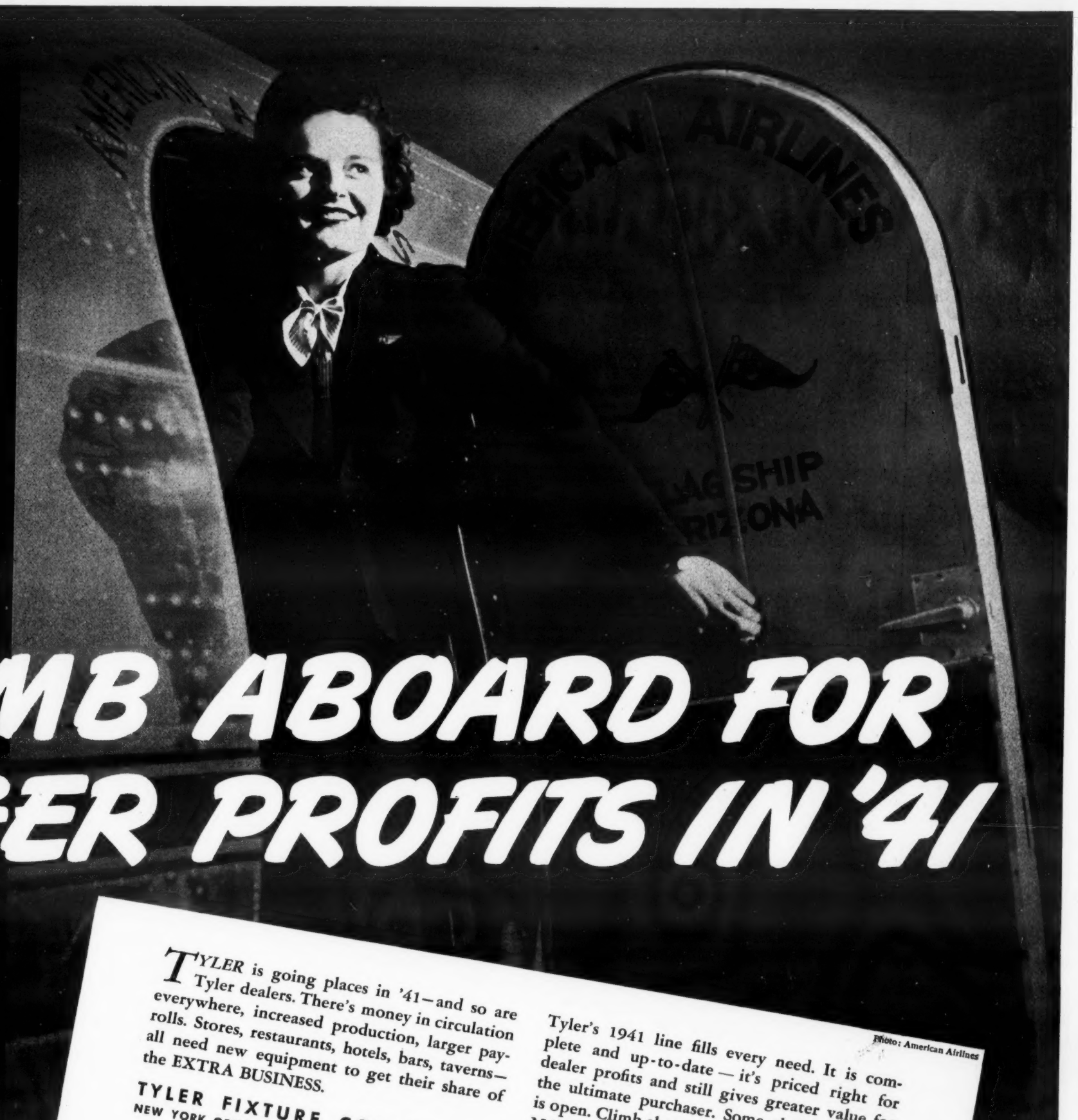
Mr. Henn has been named commercial refrigeration district manager in the Cleveland-Pittsburgh area, with headquarters in Cleveland. His territory covers eastern Ohio, western Pennsylvania, and West Virginia. Mr. Henn has been with York Ice Machinery Corp. for a number of years, most recently as a member of the Cleveland branch.

Mr. Bickel has been appointed commercial refrigeration district manager in the Chicago territory, covering the Illinois territory from Chicago to the Wisconsin line, west to Iowa, and south to Peoria. He formerly was with the Kiefaber Co., Dayton, Ohio.

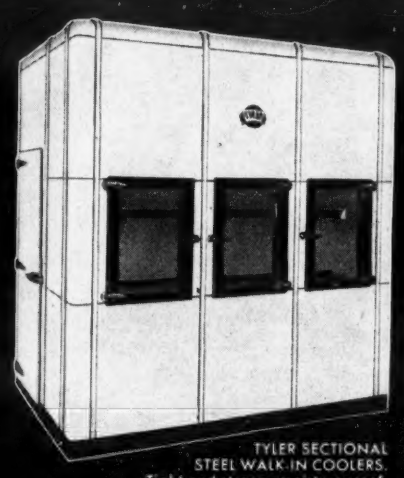


TYLER REACH-INS—available in many sizes and door arrangements, for markets, hotels, restaurants and institutions.

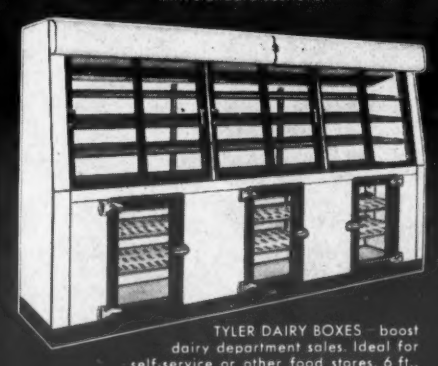
TYLER REFRIGERATED VEGETABLE DISPLAY. Large capacity. Easy servicing. A striking display unit. 6 ft. or 9 ft.



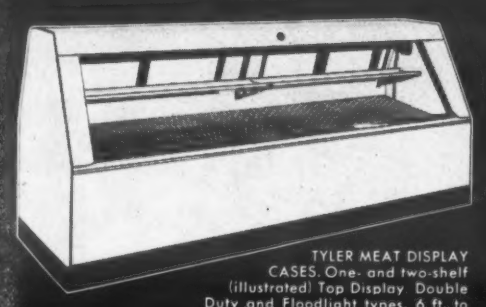
CLIMB ABOARD FOR BIGGER PROFITS IN '41



TYLER SECTIONAL STEEL WALK-IN COOLERS. Tight and strong—moistureproof. Vermin-proof. Easily enlarged with standard sections.



TYLER DAIRY BOXES—boost dairy department sales. Ideal for self-service or other food stores. 6 ft., 8 ft., 10 ft. and 12 ft. sizes.



TYLER MEAT DISPLAY CASES. One- and two-shelf (illustrated) Top Display. Double Duty and Floodlight types. 6 ft. to 12 ft. lengths.

TYLER is going places in '41—and so are Tyler dealers. There's money in circulation everywhere, increased production, larger pay-rolls. Stores, restaurants, hotels, bars, taverns—all need new equipment to get their share of the EXTRA BUSINESS.

Tyler's 1941 line fills every need. It is complete and up-to-date — it's priced right for dealer profits and still gives greater value for the ultimate purchaser. Some choice territory is open. Climb aboard! TYLER DEALERS ARE MAKING MONEY!

Photo: American Airlines

TYLER FIXTURE CORPORATION, DEPT. R, NILES, MICHIGAN

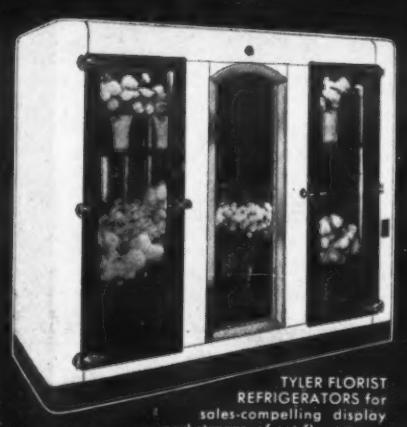
NEW YORK OFFICE: 601 W. 26th St. BOSTON OFFICE: 683 Beacon St. CHICAGO OFFICE: 1663 W. Ogden Ave.

TYLER

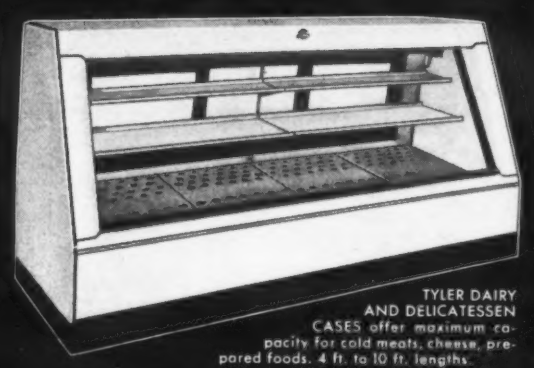
WELDED STEEL REFRIGERATORS

SKYSCRAPER STRENGTH

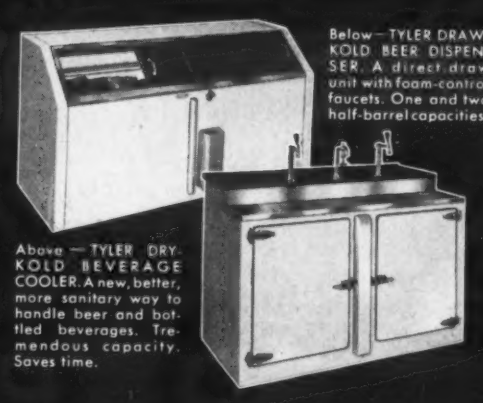
SKYLINER BEAUTY



TYLER FLORIST REFRIGERATORS for sales-compelling display and storage of cut flowers.

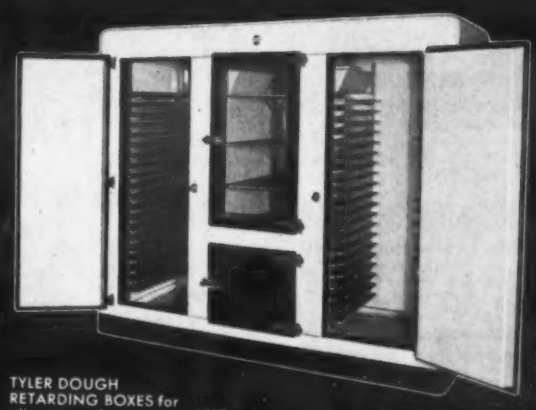


TYLER DAIRY AND DELICATESSEN CASES offer maximum capacity for cold meats, cheese, prepared foods. 4 ft. to 10 ft. lengths.



Above—TYLER DRY-KOLD BEVERAGE COOLER. A new, better, more sanitary way to handle beer and bottled beverages. Tremendous capacity. Saves time.

Below—TYLER DRAW-KOLD BEER DISPENSER. A direct-draw unit with foam-control faucets. One and two half-barrel capacities.



TYLER DOUGH RETARDING BOXES for all types of bakeries. 40% greater capacity. Bakery Display Cases also available.

'41 All-Industry Exhibition Scope Is Extended By New Exhibitors

(Concluded from Page 1, Column 5)

ating Engineers has made plans for a special one-day meeting early in the show week.

An examination of the list of exhibitors who have already contracted for space reveals a wider variety of products than have been exhibited previously, and a notable increase in the number of unit equipment manufacturers who will exhibit.

'BUYING SHOW'

Among exhibitors the All-Industry Refrigeration & Air Conditioning Exhibition has won fame as a "buying show." Actual order-taking, they report, is much greater than at most industrial shows in which they participate.

Officials of one company at the last show stated that they had written more than $20,000 in orders during the show, including two carload shipments. Another manufacturer at the close of the show produced orders representing more than $19,000 worth of business, including one order alone for $3,300 worth of merchandise.

A List of Exhibitors Is Given on Page 10.

A representative of a firm which was exhibiting for the first time declared that they had done nearly double the business they had ever done at any other trade show. Another exhibitor reported that he had met and closed a major prospect on which he had been working for five years, and saw many others whom he had no way of contacting otherwise.

R. M. McClure, executive secretary of Rema, and a veteran in trade association work, points out that the exhibitors have found many unique features in the All-Industry Refrigeration & Air Conditioning Exhibition. Says Mr. McClure:

WHY IT'S 'DIFFERENT'

"Among these unique features is the general conception back of the show itself—a manufacturers' show, conceived, launched, and managed by the manufacturers themselves with the idea of bringing together in one place at one time annually, their customers and prospective customers from the various branches of the industry and trade.

"In striking contrast to the average trade show usually sponsored by a customers' organization and one which in practice largely draws its attendants from members of its particular field, the All-Industry Show throws its gates open to all members of all branches of the industry and trade served by the exhibitor companies.

"This policy has proved particularly attractive to executives in most of the limited fields served by the exhibitor companies in that they find among the exhibits in a show catering to all branches, many products of interest to them which normally would not be displayed in a show attuned to a restricted branch of the industry.

"The All-Industry Show is unique too in that it is a great common meeting ground for executives from all branches of the industry and trade. Through the cooperation of the several technical and trade groups who hold their conventions and meetings in the same city during the week of the All-Industry Show, the show becomes the great common meeting ground for nearly everyone of importance in the industry.

SAVES TRAVEL EXPENSE

"It has been estimated that the All-Industry Show saves executives of exhibitor companies and of their customer firms, upwards of a half-million dollars a year in travel expenses alone.

" 'It's worth all of a year's hard work,' says K. M. Newcum, Superior Valve & Fittings Co., Pittsburgh, 'to be able to meet members of the trade and customers and rehash last year's business and prospects for the new season.'

"In the opinion of H. W. McPherson, the Electrimatic Corp., Chicago, 'the estimated savings in travel expense more than offset all costs of participation in the show.'

"C. C. Ryan, Dole Refrigerating Co., Chicago, says, 'It's next to impossible to estimate the cost of calling individually on all of the people who attend the exhibition and who we desire to see.'

"Customers themselves praise the idea of an All-Industry Show both for the expense saved in being able to contact home office executives of their supplier firms as well as for the time conserved.

"This is possible on account of another unique feature of the All-Industry Exhibition — factory and home office executives, with but few exceptions, personally attend and spend the full week at the All-Industry Show. Unable themselves to 'swing around the circuit' they are able at the show to personally get acquainted with many of their customers whom they otherwise would rarely meet face to face.

AID TO SALESMEN

"R. S. Dawson, sales manager, Alco Valve Co., points out that salesmen find their positions strengthened with their customers through their having met the home office and factory personnel. The personal contacts made between home office executives and heads of their distribution outlets makes for better customer relations with profit to both sides.

"Another executive says, 'I consider the show a most important advertising expenditure.' He bases this statement on the fact that the attendance list at the 1940 All-Industry Show reveals that nearly 50% of the subscribers to the trade papers in the field actually attend the show. In very, very few industries is it possible for advertisers to meet the readers of their advertisements face to face and demonstrate their products directly to them.

"The All-Industry Exhibition apparently has tapped a class of trade outlets which were not generally attending other refrigeration and air conditioning shows. The committee in charge of the First All-Industry Show in 1939 expected an attendance of about 3,000 members of the trade and were swamped with a turnout of over 6,000. In 1940 the committee prepared for 7,000 and in the face of the worst possible weather imaginable, registered nearly 8,000. With this record and with the enlarged number of exhibitor companies for the 1941 Show, the committee is planning for an attendance of 10,000 in January."

These Men Are In Charge of the Industry's Big Show

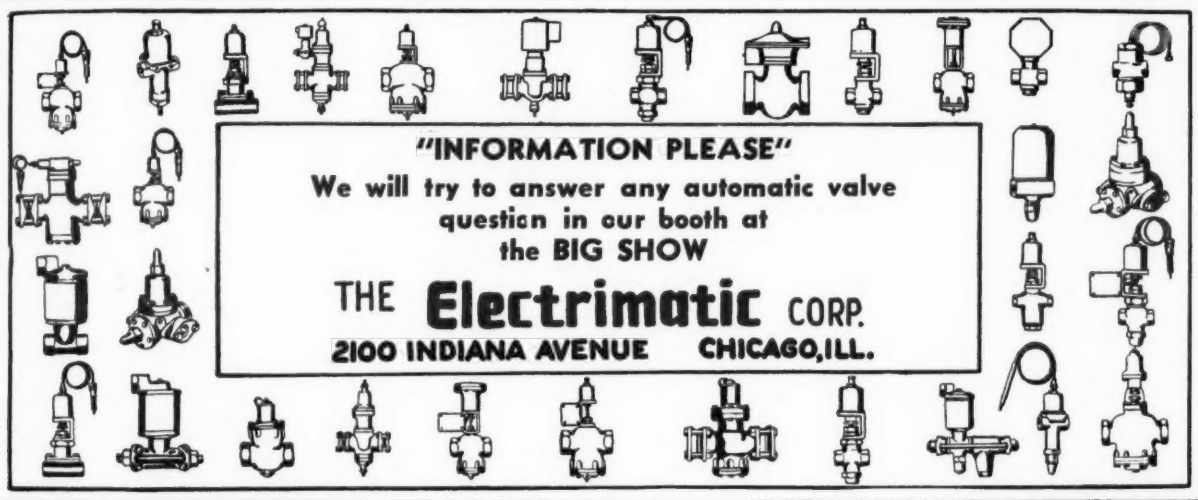
These men form the committee that formulated plans for the Third All-Industry Refrigeration & Air Conditioning Exhibition, destined to be the greatest ever. Left to right: C. H. Benson, Imperial Brass Mfg. Co.; R. H. Luscombe, Penn Electric Switch Co.; R. M. McClure, secretary of Rema and manager of the show; M. W. Knight, Peerless of America, Inc., and committee chairman; K. B. Thorndike, Detroit Lubricator Co.; and Barrett Scudder, Jas. P. Marsh Co.

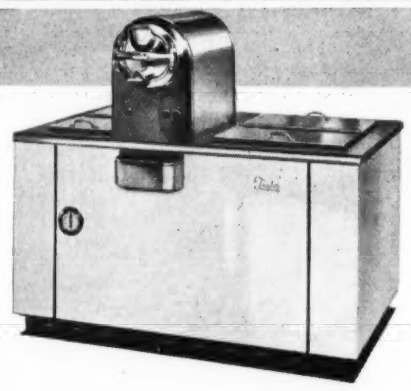
Exhibition Schedule

Stevens Hotel—Chicago

Opens	Closes
10 a.m.—Monday, Jan. 13	10 p.m.
10 a.m.—Tuesday, Jan. 14	6 p.m.
10 a.m.—Wednesday, Jan. 15	10 p.m.
10 a.m.—Thursday, Jan. 16	4 p.m.

All-Industry Banquet
6:30 p.m. Tuesday, Jan. 14


"INFORMATION PLEASE"
We will try to answer any automatic valve question in our booth at the BIG SHOW
THE Electrimatic CORP.
2100 INDIANA AVENUE CHICAGO, ILL.



★ The Taylor Speed-Ease-Freezing, Hardening, and Dispensing Facilities for 2 to 15 or 20 gals. a day.

Sell to the 85½% MARKET and Have a 5 to 1 Sales Advantage!

PROOF From the Field!

NEWS OF THE YEAR
● Your bulletin about the Speed-Ease freezer brought the news of the year. This unit will open up an avenue of sales that will shove your previous sales far into the background.

SALE IN FIVE MINUTES
● I showed your Speed-Ease bulletin and illustration to a prospect and in less than five minutes he placed an order.

NEVER MORE SOLD
● Your letter announcing the SPEED EASE was really a thrill. I have never been more sold on any product and we are going after business on this unit like never before.

SOLD FOUR IN WEEK
● We sold four Speed-Ease units last week, and it is our firm opinion that we are really going to town on this unit.

★ The big market for counter freezers is the 85½% of all ice-cream outlets that sell less than 1000 gallons a year. They need *freezing, hardening, and dispensing* equipment priced to pay for itself on their gallonage.

★ One freezer—and only one—meets all their requirements. The Taylor SPEED-EASE! SPEED-EASE gives them all the facilities they need . . . in one compact unit . . . at a price they can afford.

★ So SPEED-EASE opens the 85½% market—gives you a 5 to 1 sales advantage. And there are Taylor Freezers for the 14½% market, too, as well as for Frosted Malted.

TIME TO PLAN FOR '41 • SO INQUIRE NOW!

Write Today for Complete Information on the Freezer Franchise that offers you the Greatest Sales and Profit Possibilities

TAYLOR FREEZER, BELOIT, WISCONSIN

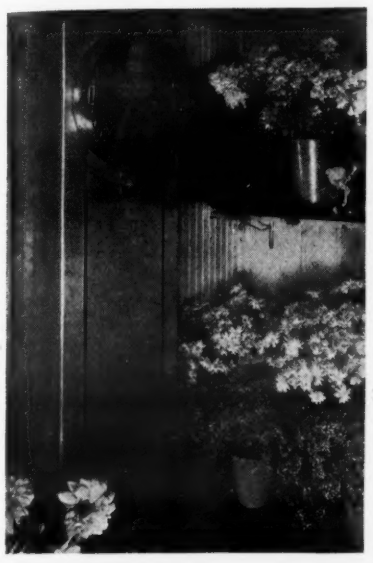
PEERLESS VALUE STANDS OUT!

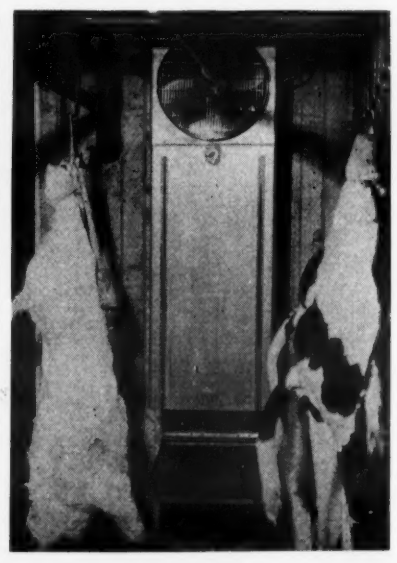
AMERICA OVER, PEERLESS LOW-SIDES DOMINATE . . . BECAUSE THEY MEET THE SPECIFICATIONS OF EXACTING BUYERS LOOKING FOR THE BEST OVER-ALL VALUE!

De luxe equipment in everything but price! More saleable . . . *because Peerless has successfully shouldered the job of creating the standards of the refrigeration industry.* Call the roll of improvements contributing vitally to better performance—you will find Peerless responsible for an impressive number. Each reflects the accumulated experience of a sales and engineering group with the ability and courage to pioneer!

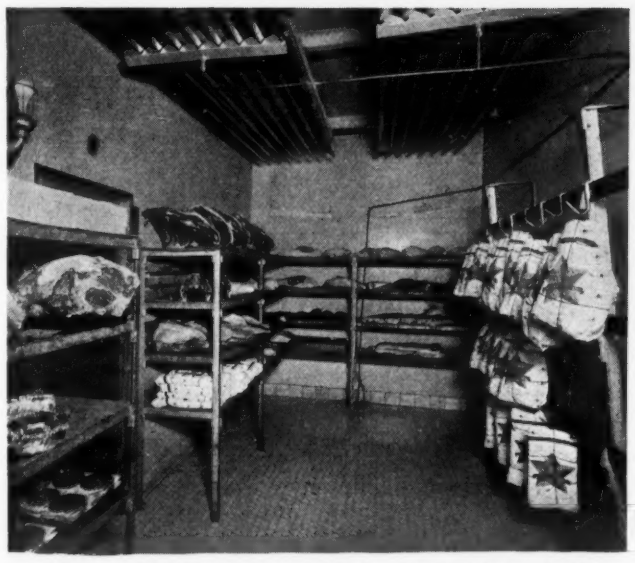
Hence there is only one reason for the dominant position of Peerless Products—*their value is written on their face!* Each unit is a milestone of engineering progress, with abler, more economical and longer performance built-in. Each unit is so styled and fabricated that in every detail it looks the value it actually is. That's why Peerless equipment is easy to sell!

Peerless Products are available! A chain of strategically located factories, staffed with competent engineers, is your assurance of miraculously swift service. Peerless Products are America's most complete line of refrigeration low-sides . . . an ever-ready source of "More Refrigeration per Dollar!"



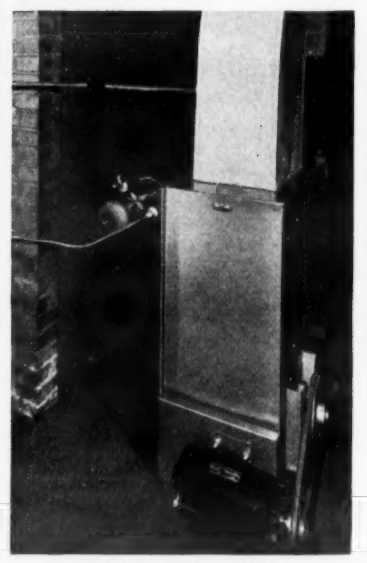


GUN COOLERS Basically different—wholly original—vastly better! Pioneered by Peerless, the Gun Cooler reverses the operation of conventional blower-type units—performs with amazing success in upside-down fashion. Here, in individual packages, is refrigeration as easy to install as hanging a clock. Above is a mobile demonstrator Walk-in Box, equipped with a Peerless Gun 50.



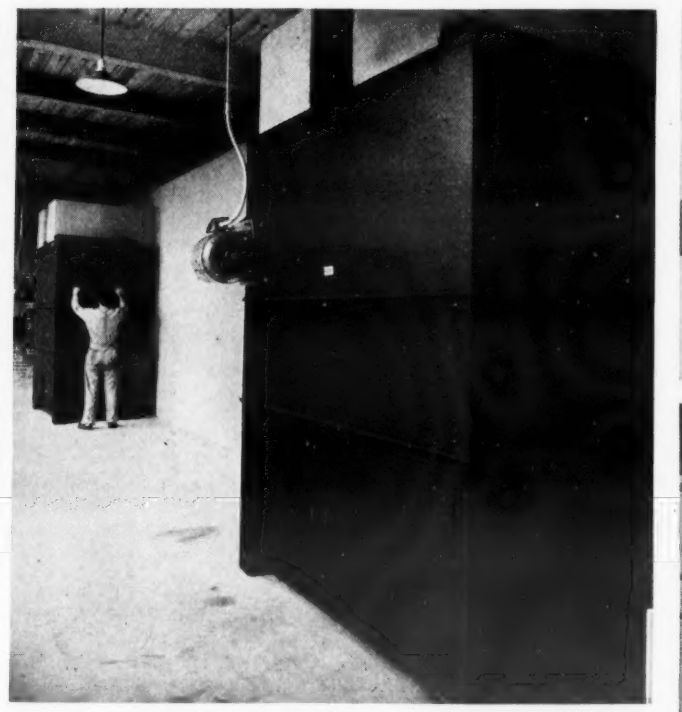
DE LUXE FLASH COOLERS

The "show piece" of modern refrigeration! Louvres polished to brilliant beauty—utterly superior in cooling qualities. Wider—shallower—saves pay space. Always the proper air circulation essential to better food preservation.

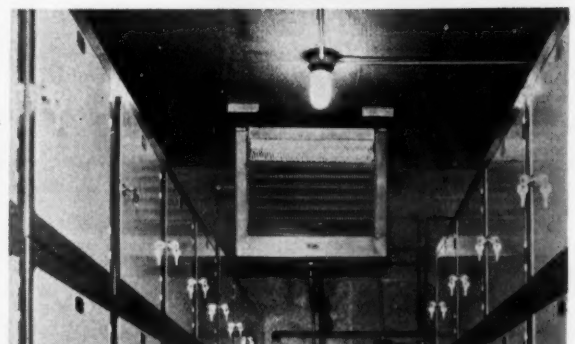


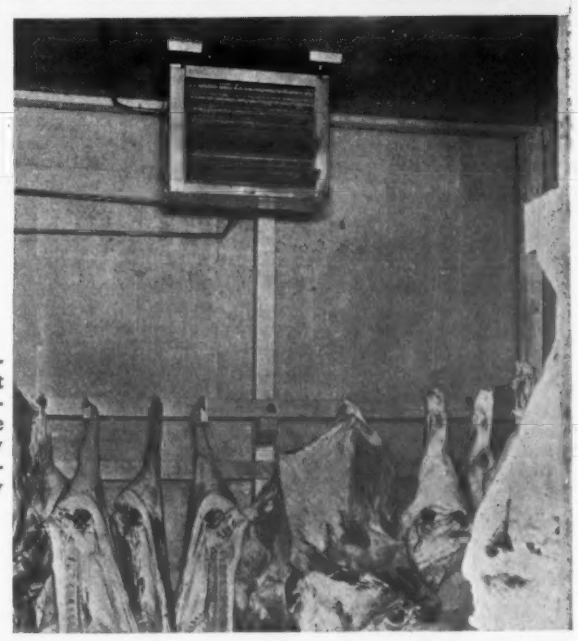
WATER SAVERS

Big and small units! Low in cost! Radically improved in design and built of nothing but the best. Seam-welded for water tightness. Full cone sprays—every pound of water works overtime!



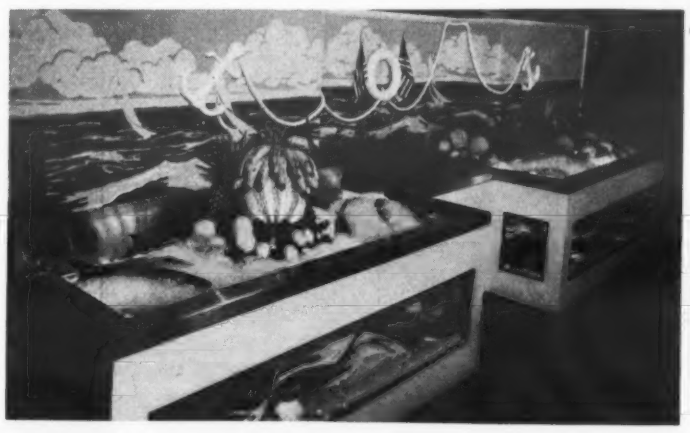
CANNON COOLERS The heavyweight champion of refrigeration—a powerful source of solid, continuous cold! Hang it on the ceiling, stand it on the floor, use it with or without ducts . . . for any commercial refrigeration job requiring temperatures from below 32° to above 50°.





ZERO PADS

Peerless' latest engineering triumph booms the cold plate market! Amazingly designed to banish every last bit of useless weight and space. Slim as a pencil—saves 75% of usual refrigerant cost.



UNIT COOLERS Marvels of simplicity—giants in performance—classically beautiful in design! Peerless Unit Coolers are a product of sound engineering development which really puts teeth in the statement, "More BTU per Dollar." Upper picture: Zero Cooler being defrosted with Peerless Frost Buster. Below: Standard Unit Cooler in chill room.

VALVES Here in one line is every type of valve you need . . . including the Peerless original Velvet Action Thermal Expansion Valve.

AT THE SHOW

You are cordially invited to visit the complete display of Peerless Products for 1941 at the All-Industry Refrigerating and Air Conditioning Exposition . . . January 13th to 16th . . . Stevens Hotel, Chicago.

BOOTHS 102-3-4-5

Peerless OF AMERICA INC.

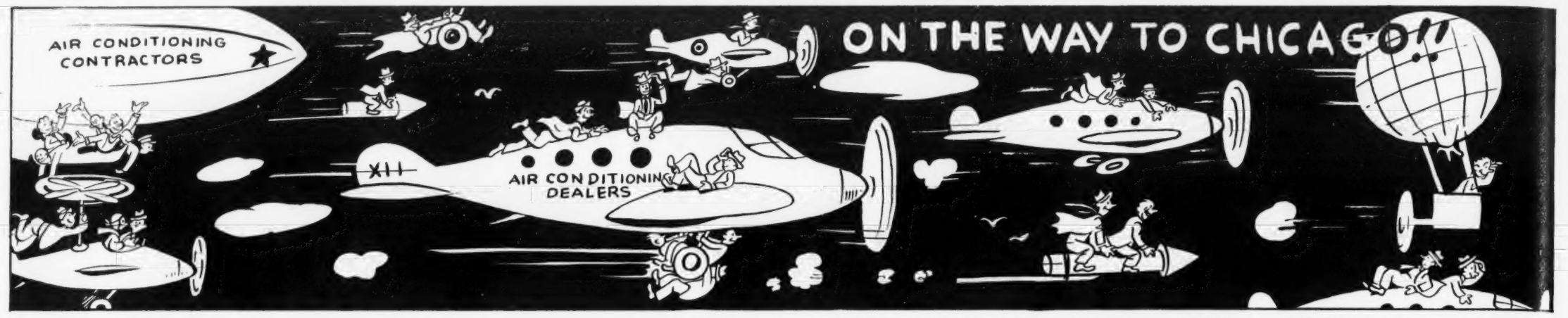
Midwest Factory, General Offices—515 W. 35th Street, Chicago

NEW YORK FACTORY
43-20 34th Street
Long Island City

PACIFIC COAST FACTORY
3000 South Main St.
Los Angeles, Calif.

SOUTHWEST FACTORY
2218 N. Harwood St.
Dallas, Texas

EXPORT DIVISION
P. O. Box 636
Detroit, Mich.



National Air Conditioning Association Shifts Officers, Adopts New Program

(Concluded from Page 1, Column 3)

the unexpired term of John H. Keller of Detroit, who recently resigned. Mr. Buensod is chairman of the air conditioning committee of the National Heating & Piping Contractors Association and a member of A.S.H. & V.E.

Details of the change in the National Air Conditioning Association set-up were approved by the directors at a telephone conference conducted on a long distance hook-up by A. C. Buensod here this week. Mr. Buensod arranged to have all directors connected on one telephone circuit in order to discuss plans for the association and to obtain the approval of the directors to the immediate program.

Mr. Buensod also announced that a number of manufacturers had joined the association as "associate members" as an indication of their desire to cooperate with the association program. These companies are Fairbanks, Morse & Co., Taylor Instrument Co., Jenkins Bros. Co., Buffalo Forge Co., and American Blower Corp. Mr. Buensod stated that several other manufacturers were interested in the advancement of the air conditioning industry through the association and he expected to announce their membership at an early date.

Two issues of a "Bulletin" of the association will be published before the Chicago convention by J. F. Koellish of New York who has been retained as temporary editor.

The Association has been incorporated under the laws of New York state and an attorney has been retained to re-write the by-laws to conform with the present constitution. The group is making a drive for membership based on the policy and program set forth in a new application form.

According to Mr. Buensod the National Air Conditioning Association will operate as a clearing house for important industry information and carry on a constant educational program. Member firms will join as individual organizations, and the association does not plan to take in local groups in a body.

"We plan to cooperate with all local organizations in the industry, such as the existing bureaus, councils, and local associations," Mr. Buensod said, "but we do not plan to interfere with the fine work that these groups are already doing. Members of the association will be solicited on the basis of individual firms, and not as associations or groups.

"We feel that when the dealers, distributors, and engineering contractors throughout the country find out that the National Association can be of definite benefit to them, they will all be interested in joining. The present plan is to let the association stand on its own merits. We know that many manufacturers will cooperate because they recognize the need of an association of this kind in the air conditioning industry," Mr. Buensod said.

The purpose of the association is "to advance the sound development of the Air Conditioning Industry in the interest of public service. Its program is as follows:

10-POINT PROGRAM

"1. To function as a central and responsible body representative of all branches of the air conditioning industry.

"2. To keep in close touch with all matters pertaining to air conditioning in order to safe-guard the interests of the industry.

"3. To develop a spirit of mutual respect, esteem, and cooperation among all branches of the industry; and to provide facilities for concerted action in matters of common interest.

"4. To encourage the practice of good business methods and sound standards in the industry.

"5. To educate the public to better understanding of the functions and results to be expected from the equipment used in the industry.

"6. To educate the public on the wisdom of demanding the best in engineering, materials, workmanship, and applications.

"7. To assist in developing local, state, and national safety codes.

"8. To assist local members in organizing councils or associations in their communities.

"9. To develop and improve the service rendered the public.

"10. To promote better utility cooperation in all communities."

Directors of the association feel that the policy and program of the association should appeal to all those engaged in the industry and merit their wholehearted support.

NEW OFFICERS NAMED

Officers of the association are: Jesse W. Page, Jr., Page-Williamson, Inc., Charlotte, N. C., president; J. N. Sprekelmeyer, General Engineering Corp., Fort Worth, Tex., vice president; and A. C. Buensod, Buensod-Stacey Air Conditioning, Inc., treasurer.

These officers and the following members constitute the board of directors: John H. Keller, Mechanical Heat & Cold, Inc., Detroit; E. R. Cooney, Cooney Refrigeration Co., Inc., Buffalo; Alfred Epstein, Independent Refrigeration Co., Los Angeles; M. S. Lebair, York Ice Machinery Corp., Philadelphia; and S. J. Shure, Natkin & Co., St. Louis.

A. C. Callahan, who has been named as secretary of the association, subject to the approval of the Chicago convention, has been identified with trade association work in the refrigeration and air conditioning field for a number of years. He has acted as secretary for the Refrigerator Association of New York and for the Refrigeration & Air Conditioning Association of New York City.

In announcing the appointment, Mr. Page stated that "Mr. Callahan brings to the management of the association's affairs a decade of experience in the direction of trade organizations in the air conditioning and refrigeration fields, in which he has specialized."

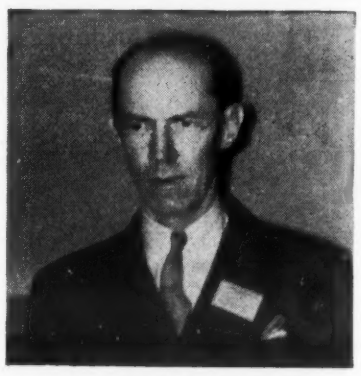
Both Mr. Page and Mr. Buensod are enthusiastic over the present outlook for the association and feel that it will become an important factor in the air conditioning industry within the next few months.

Members of the association and others interested in the program have been urged to make reservations for the January convention well in advance of the Jan. 13-15 date, as a large turnout is expected during the All-Industry Refrigeration and Air Conditioning Exhibition.

Details of the meeting will be announced later.

NACA Heads

JESSE W. PAGE, JR.
President



J. N. SPREKELMEYER
Vice President

A. C. BUENSOD
Treasurer

Eye and Ear Hospital Cools X-Ray Room

PORTLAND, Me.—Air conditioning has been installed in the X-ray room of the Maine Eye & Ear Hospital here by the Associated Engineers of this city. Because the room is located directly over the boiler room, and because it is necessary to close and screen all windows when X-ray photographs were being taken, temperature and ventilation conditions were aggravated.

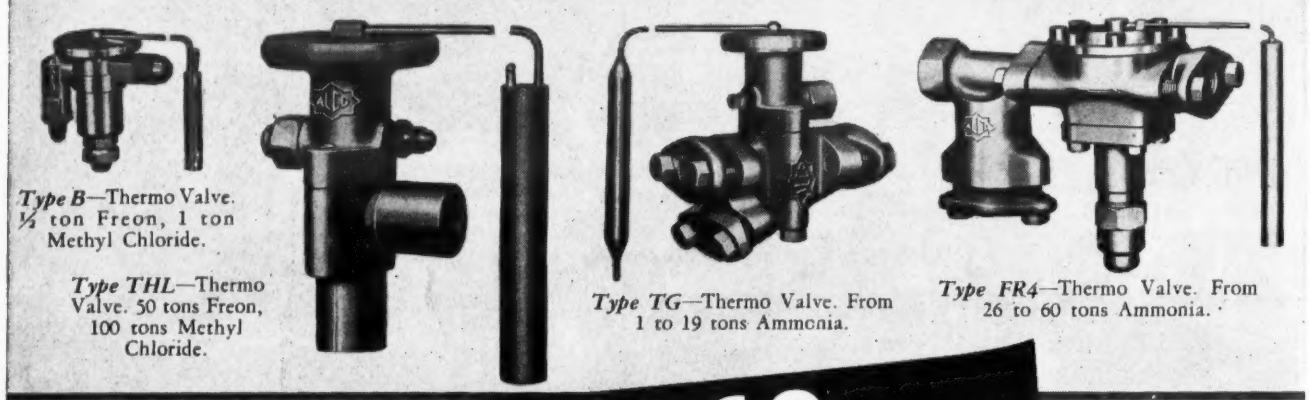
The room is cooled by a 1-ton self-contained Westinghouse unit, mounted on a pipe framework in an office next to the X-ray room. The conditioned space measures 18 x 20 feet x 10 feet high.

Design conditions permit a temperature reduction of 12°, with a 50% relative humidity. Owens-Illinois spun glass filters are used to clean the 500 c.f.m. of air delivered to the room. The system uses 30% fresh air.

Both discharge and return grilles are placed on the opposite wall from the X-ray machine. The discharge grille is arranged to deflect the air upward because of the low ceiling.

No sound-absorbent materials were necessary, as the condensing unit is spring mounted. Ducts leading to the supply and return grilles were installed by M. B. Bourne & Son of Portland.

THERMO EXPANSION VALVES



Type B—Thermo Valve. ½ ton Freon, 1 ton Methyl Chloride.

Type THL—Thermo Valve. 50 tons Freon, 100 tons Methyl Chloride.

Type TG—Thermo Valve. From 1 to 19 tons Ammonia.

Type FR4—Thermo Valve. From 26 to 60 tons Ammonia.

THE COMPLETE ALCO LINE
Covers the Field of Refrigerant Control

● Whatever your requirements in the wide field of refrigerant control, there is an Alco Valve that correctly meets the demands of the job. From the smallest to the largest air conditioning or refrigeration installations, the proper Alco engineered refrigerant control will materially contribute to the efficiency of the system.

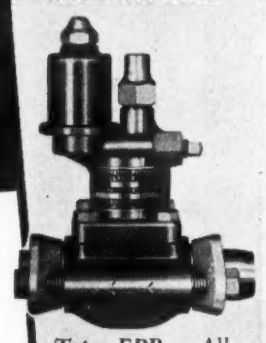
You'll find proof of Alco's leadership in the performance record of thousands of Alco Valves in operation on every type of installation throughout the world today. Alco Valves, plus Alco's engineering experience and extensive knowledge of control problems provide a combination that is second to none in the entire industry.

The complete Alco Line includes Thermostatic Expansion Valves, Automatic Expansion Valves, Magnetic Stop Valves, Evaporator Pressure Regulators, Float Switches and Float Valves — in a wide variety of types, sizes, and capacities.

Alco offers you the most accurate, dependable refrigerant controls available today—designed for long life and completely satisfactory service.

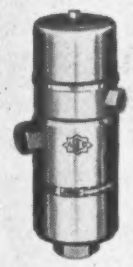
ALCO VALVE COMPANY, 2620 Big Bend Blvd., St. Louis, Missouri
New York — Chicago — Seattle — San Francisco — Los Angeles

EVAPORATOR PRESSURE REGULATORS



Type EPR — All Refrigerants. Port sizes up to 2 inches.

FLOAT SWITCHES

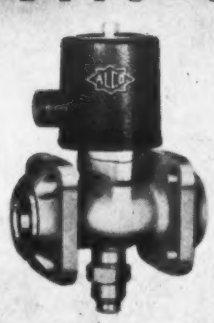


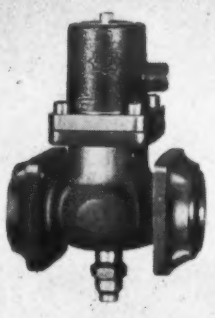
Type J—Liquid Level Control for All Refrigerants.

MAGNETIC STOP VALVES

Type S1—Magnetic Valve. 3 tons Liquid Freon, 6 tons Liquid Methyl Chloride.

Type R—Magnetic Valve. Liquid—35 tons Freon, 70 tons Methyl Chloride. Suction—9 tons Freon, 18 tons Methyl Chloride.

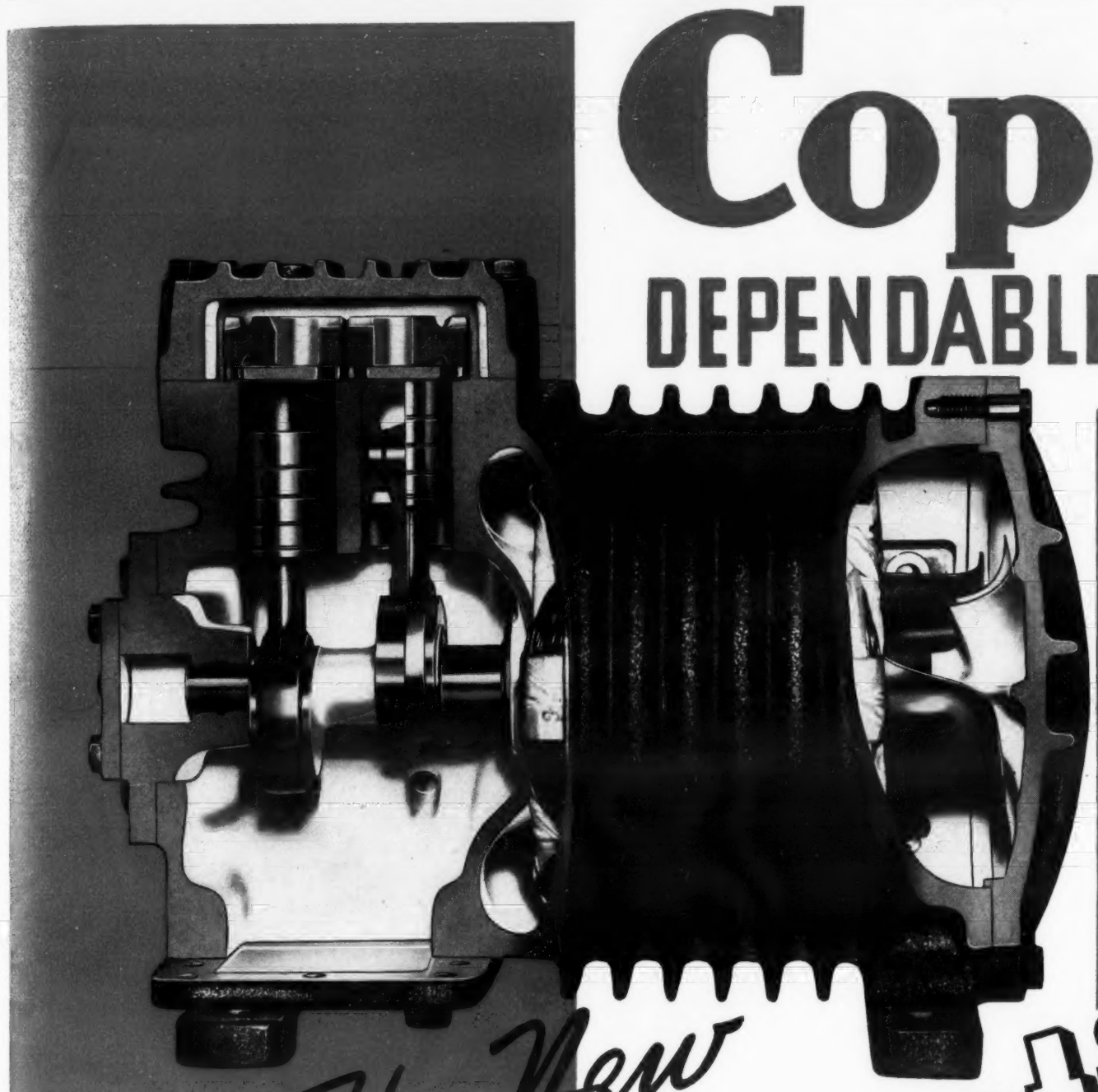




Type SP — Magnetic Valve. 3 tons Liquid Ammonia.

Type R — Magnetic Valve. Liquid—172 tons Ammonia. Suction—28 tons Ammonia.

ALCO *Engineered Refrigerant Controls*
FOR HIGHEST EVAPORATOR EFFICIENCY

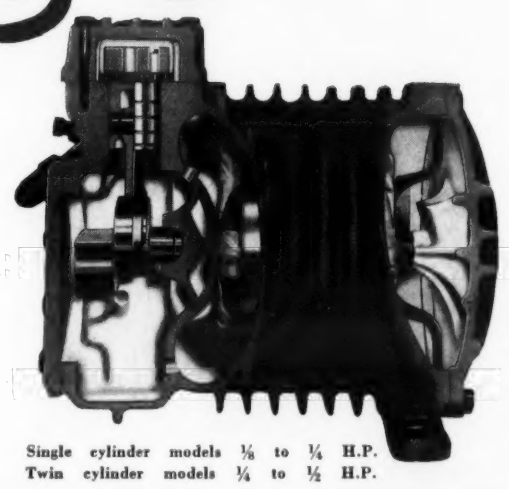


Copeland

DEPENDABLE *Electric* REFRIGERATION

Announcing
an outstanding addition to a famous line...

The New Copelametic Units



Single cylinder models ⅛ to ¼ H.P.
Twin cylinder models ¼ to ½ H.P.

Serviceable-Hermetic*
Units that set new Standards of Dependability

● Combining the advantages of both welded-in and open type units, the Copelametic design is an important development in refrigeration. It eliminates the belt and seal, requires no motor oiling attention . . . it permits easy field servicing. Offering these features, it reduces maintenance cost to the lowest point ever achieved. In economy, too, and smooth, quiet operation the Copelametic unit is superior.

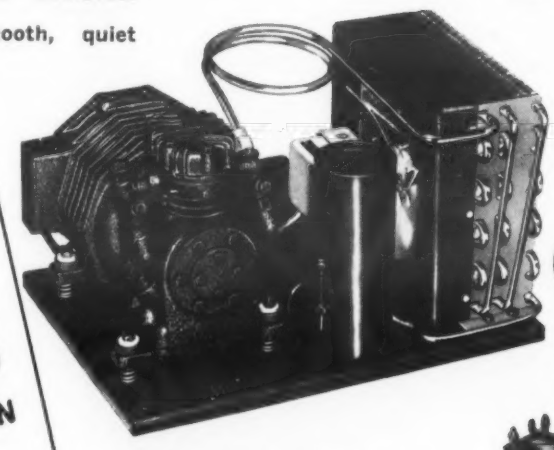
Fundamentally, the Copelametic compressor represents no major departure from the conventional reciprocating type, except for the drive and refinements such as the oiling system. It retains even the same general appearance and valve arrangement. Thus, the service engineer is instantly familiar with the procedure in connection with any necessary field adjustments.

*Can be serviced in the field.

DESIGN FEATURES

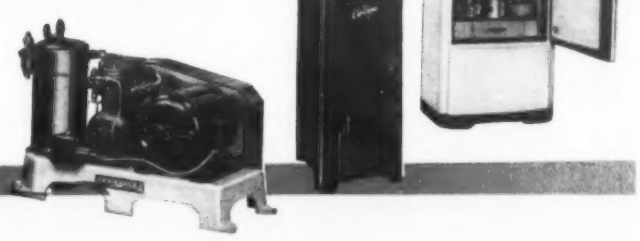
- No belt! No seal!
- No motor oiling required!
- Automatic and positive forced-feed lubrication to every moving part without the use of an oil pump.
- No splashing or churning of oil in crankcase. Oil is picked up at motor end by specially designed dipper.
- Efficient heat dissipation.
- Bronze connecting rods rifle-drilled to wrist pin.
- Forged steel eccentric shaft.
- Every part accessible for easy servicing in the field.

SEE THEM at SPACES 87-88
ALL-INDUSTRY EXHIBITION
CHICAGO



½ H.P. Copelametic Unit for Self-Contained Installation. Models available up to ½ H.P.

Copeland
Products known the World Over



Copeland Refrigeration Corporation, Sidney, Ohio

New York Branch, 27-01 Bridge Plaza North, Long Island City, N. Y.
Export Department, 60 Wall Tower, New York City

Bastian-Blessing Moves New York Offices

NEW YORK CITY — Showrooms, offices, and service facilities of the New York branch of Bastian-Blessing Co., formerly located at 635 Sixth Ave., have been moved to larger quarters at 116-120 East 27th St.

The New York branch continues under the management of Edwin D. Higgins. The national users and chain store division, under the management of James J. Gavigan, will headquarter at the same address.

Modern Smoke House Described In Booklet

SYRACUSE, N. Y.—"Three Operations in One," an illustrated four-page folder describing the Carrier air conditioned smoke house, has just been published by the Carrier Corp.

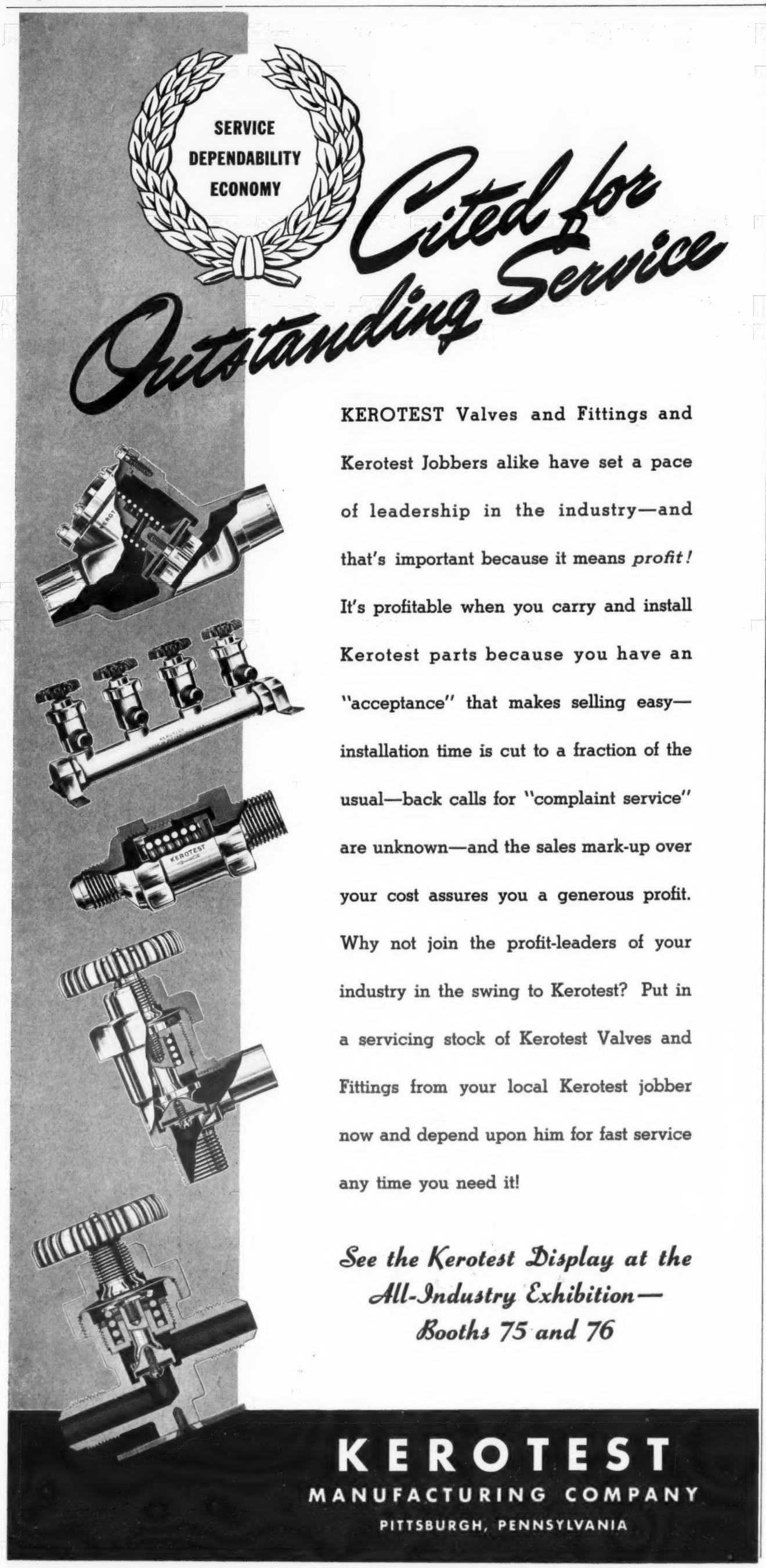
Dealing with the meat smoking, cooking, and showering operations, the folder points out features of the new smoke house, which combines all three of the processes in the one unit.

Sweeney Electric Builds 'Renovating' Plant

DENVER—B. K. Sweeney Electric Co., distributing firm of G-E appliances and radios, is building a new warehouse at 23rd and Wazee Sts. here.

The building, which will be used for appliance storage and renovation, will be 317 feet long and 150 feet wide.

Cost will be approximately $100,000, according to B. K. Sweeney, head of the company.



Cited for Outstanding Service

KEROTEST Valves and Fittings and Kerotest Jobbers alike have set a pace of leadership in the industry—and that's important because it means *profit!* It's profitable when you carry and install Kerotest parts because you have an "acceptance" that makes selling easy—installation time is cut to a fraction of the usual—back calls for "complaint service" are unknown—and the sales mark-up over your cost assures you a generous profit. Why not join the profit-leaders of your industry in the swing to Kerotest? Put in a servicing stock of Kerotest Valves and Fittings from your local Kerotest jobber now and depend upon him for fast service any time you need it!

See the Kerotest Display at the All-Industry Exhibition— Booths 75 and 76

KEROTEST
MANUFACTURING COMPANY
PITTSBURGH, PENNSYLVANIA

If They Can Be Sold—Anybody Can

"What do you mean, you can't afford it," says Jack Langston, Dallas commercial refrigerator dealer, as he pulls the above picture out of his kit to show prospects who raise that cry. It represents the site of one of his recent installations.

And this is the interior view of one of his newer jobs. It's one sure way to break down a "this isn't for me" argument on the part of a prospect.

* * *

Pictures Are Clinchers In Selling Commercial Refrigeration To the Poorer Prospects

DALLAS, Tex.—To convince owners of small and relatively poor stores that they can afford commercial refrigeration and use display cases at a profit, Jack Langston, of Jack Langston Co., is using pictures of equipment installed in similar small places of business.

Instead of showing the prospect pictures of high-priced installations in large markets, Mr. Langston carries a portfolio of job pictures showing equipment in the most unattractive surroundings. His purpose is to prove to the small merchant that the use of display cases is not limited to wealthy business establishments.

The pictures are also carried by all salesmen employed by the company, which manufactures refrigeration equipment in addition to selling the Weber line.

"It's always easy to get pictures showing equipment in the most desirable surroundings," Mr. Langston explains, "but the little fellow looks at these pictures and immediately decides that he cannot afford such equipment."

According to Mr. Langston, prospects are likely to say—"Sure—that's all fine, and I wish I could have it. But that fellow—he's a bigger man than I am. He can buy when I can't. It would probably break me to buy that case—I'm nearly broke now."

To combat this kind of reaction, Mr. Langston has made a special effort to get pictures of commercial installations in small and unlikely places of business.

An example of this is found in the case of the Andrews store, where a 5-foot display case was sold several months ago to the Negro proprietors.

Purchased on the meter plan at 75 cents per day, the case soon had to be exchanged for a 6-ft. model because business volume in the store increased sharply.

According to Mr. Langston, the Andrews store is just a shack—unpainted and toppling. Daylight leaks through the rough board walls, but inside is a stock of goods that crowds the little room to capacity.

Questioned about business since the new display case was installed, the colored woman in charge reported that the store is now doing a business of $50 per week—which represents a new-found prosperity. She also indicated that the business was outgrowing the building, and that it would be necessary to build a new store in the near future.

"We are selling the little fellow the idea that he certainly can afford to do what the other little fellow has done," says Mr. Langston, "and we are using pictures of places like this to show that it can be done."

Frosted Coils In Case Convince Candy Eaters

ORLANDO, Fla. — Frosted refrigeration coils plainly visible in a candy display case have attracted attention and boosted candy sales for the local druggist in whose store this unusual installation was made by G. N. Dodge Co., General Electric distributor here.

Effect of the display case, according to the druggist, is mostly psychological, for the store itself is air conditioned, and consequently it would not be difficult to keep the chocolates and similar perishable candies in good shape without the use of any added refrigeration.

"But we have found," he points out, "that just the idea of refrigerating these confections impresses the customer and helps to make a sale. The coils, with their coating of white frost, form an attractive part of the display, and give the customer the idea that we are really doing our utmost to provide properly preserved candies."

Beer Cooler-Merchandiser Boosts Sales 1,000%

BALTIMORE—A Jewett Beerador, which replaced a former candy display, has brought 1,000% more business to the Northwestern Pharmacy here, according to Carl H. Witzke, proprietor.

COMING SOON

The

All-American REFRIGERATOR

for EVERY AMERICAN HOME

featuring

All-American Quality in Every Price Group

This year, you are going to look carefully at products, profits and promotions because you know that comparing price tags gets you exactly nowhere.

And, you're going to look carefully at distribution, too, because you know that a well-financed, sales-minded distributor can be a tremendous factor in the success of the dealers he serves.

Of the Norge 1941 product, we can say briefly that it is All-American quality throughout; that it is beautifully styled; that it incorporates an outstanding innovation which dramatically exploits Norge patents and exclusive features; that it includes today's highly-perfected version of the original Norge Rollator Compressor with a vital refinement which we have never licensed to any other manufacturer.

As for profits, any energetic business man of good repute can get into the Norge profit picture and stay there with a minimum investment. Promotions and advertising are focused heavily upon the things which dealers have told us they prefer.

Our distributors, as the accompanying roster shows, are the best in the country—men who are well and widely known throughout the industry, business leaders in the territories they serve. They work constantly and successfully to increase volume and profits for thousands of progressive Norge dealers.

Through the distributor in your territory, Norge offers you an opportunity to make money all the year 'round, selling the only complete family of appliances produced by a major manufacturer. We invite your inquiry.

NORGE *for* '41

This brilliant new *All-American* Refrigerator will soon be available through these Norge Distributors

ALBANY	P. H. SPONNEY COMPANY, 241 Central Avenue
ATLANTA	HOPKINS EQUIPMENT CO., INC., 418 W. Peachtree St., N. W.
BALTIMORE	SOUTHERN WHOLESALERS, INC., 223 S. Paca St.
BIRMINGHAM	BIRMINGHAM ELECTRIC BATTERY CO., Avenue B and 23rd St., S.
BOSTON	NORGE SALES CORPORATION, 736 Beacon St.
BUFFALO	BEHOMAN NORGE COMPANY, 101 Eagle St.
BILLINGS	MIDLAND IMPLEMENT COMPANY, INC., 2303 Montana Ave.
CHARLESTON	CHARLESTON ELECTRICAL SUPPLY CO., INC., 914 Kanawha St.
CHATTANOOGA	CLEMONS BROTHERS COMPANY, West 6th St. & Chestnut
CHARLOTTE	SOUTHERN BEARINGS & PARTS CO., INC., 215 N. College St.
CHICAGO	SAMPSON ELECTRIC COMPANY, 3201 S. Michigan Ave.
CINCINNATI	THE COMPTON-KNOEDEL DISTRIBUTING CO., 300 John St.
CLEVELAND	THE ARNOLD WHOLESALE CORPORATION, 6209 Detroit Avenue
COLUMBUS	MUTUAL DISTRIBUTORS, INC., 225 W. Broad St.
DALLAS	TEXAS NORGE SALES COMPANY, 2103 Commerce St.
DENVER	THE AUTO EQUIPMENT COMPANY, 14th and Lawrence Sts.
DES MOINES	SIDLES COMPANY, 119 Tenth Street
DETROIT	RADIO DISTRIBUTING COMPANY, 100 Selden Avenue
EL CENTRO	IMPERIAL HARDWARE COMPANY, INC.
EL PASO	POPULAR DRY GOODS COMPANY, INC., San Antonio, Waco and Texas Sts.
HOUSTON	AUTOMATIC SALES CORPORATION, 1205 M & M Bldg.
INDIANAPOLIS	THE GIBSON COMPANY, 222 N. Capitol
JACKSONVILLE	GAIR & SULTMAN, INC., 808 W. Adams St.
KANSAS CITY	MAYFLOWER SALES COMPANY, 2007 Grand Avenue
LITTLE ROCK	WHOLESALE APPLIANCES, INC., 201 Rock St.
LOS ANGELES	LEO J. MEYBERG COMPANY, INC., 2037 S. Figueroa St.
LOUISVILLE	THE SUTCLIFFE COMPANY, INC., 239 S. Fourth St.
MEMPHIS	LYLE-CHEEKHAM, INC., 181 Madison
MILWAUKEE	ROTH APPLIANCE DISTRIBUTORS, INC., 847 West Virginia St.
MINNEAPOLIS	REINHARD BROS. CO., INC., 11 S. Fifth St.
NASHVILLE	READ ELECTRIC COMPANY, 109 Eleventh Ave. S.
NEW ORLEANS	NORGE PRODUCTS COMPANY, INC., 1440 S. Carrollton St.
NORFOLK	NORGE SALES COMPANY OF NORTH TIDEWATER, 130 Granby Avenue
NEW YORK	WARREN NORGE COMPANY, INC., 318 Fourth Avenue
OKLAHOMA CITY	WILLIAMS SEE CO., INC., 120 E. Grand Ave.
OMAHA	SIDLES COMPANY, 202 S. 18th Street
PHILADELPHIA	TRILLING & HOCHSTADT, Market at 45th St.
PHOENIX	BARROWS FURNITURE COMPANY, 33 E. Central
PITTSBURGH	
PORTLAND, ME.	
PORTLAND, ORE.	
RICHMOND	
ROANOKE	
ROCHESTER	
SALT LAKE CITY	
ST. LOUIS	
SAN ANTONIO	
SAN FRANCISCO	
SEATTLE	
SIOUX CITY	
SPOKANE	
SPRINGFIELD, MO.	TUTTLE CREAM
SYRACUSE	
TOLEDO	
WASHINGTON	

IN CANADA: CANADIAN RADIO CORP., LTD., TORONTO 8, CANADA

In addition to well-balanced domestic distribution, Norge products have wide acceptance abroad through 159 Distributors in 94 foreign lands.

NORGE DIVISION BORG-WARNER CORPORATION, DETROIT, MICHIGAN

SEE NORGE BEFORE YOU BUY

NORGE ROLLATOR REFRIGERATION • GAS AND ELECTRIC RANGES • WASHERS • HOME HEATERS • COMMERCIAL REFRIGERATION

Success of 1941 All-Industry Exhibition Assured by Advance Sale of Space

'Information Please' Program Planned for Electrimatic Booth

CHICAGO—Industry members can start saving up their questions on automatic valves and circuits involving these valves, and use them to "stump the experts" at the Electrimatic exhibit during the Third All-Industry Exhibition Jan. 13 to 16.

According to present plans, Electrimatic will conduct a continuous "Information Please" program during the period of the show, with its own and visiting experts present to answer any and all questions regarding automatic valve operation and applications.

Company experts will man the booth during the daytime, with the visiting experts present for night sessions. In this way, believes Hal McPherson, Electrimatic sales manager, questions that proved too tough for the "day shift" could be brought up again when other quizees were present at night.

Some sort of payoff for particularly interesting questions or problems also is contemplated, Mr. McPherson says, as is the case on the original "Information Please" radio show.

The company hopes to have such prominent engineers as W. H. Motz, Sam Bloom, "Pop" Kranz, O. W. Sandborg, Walter Motts, Deane Perham, Emerson Brandt, and others as visiting experts.

Questions will not be restricted to those of technical caliber, according to present plans.

Jobbers' questions on selling valves and similar equipment also is being considered as a topic for one evening's "quiz session."

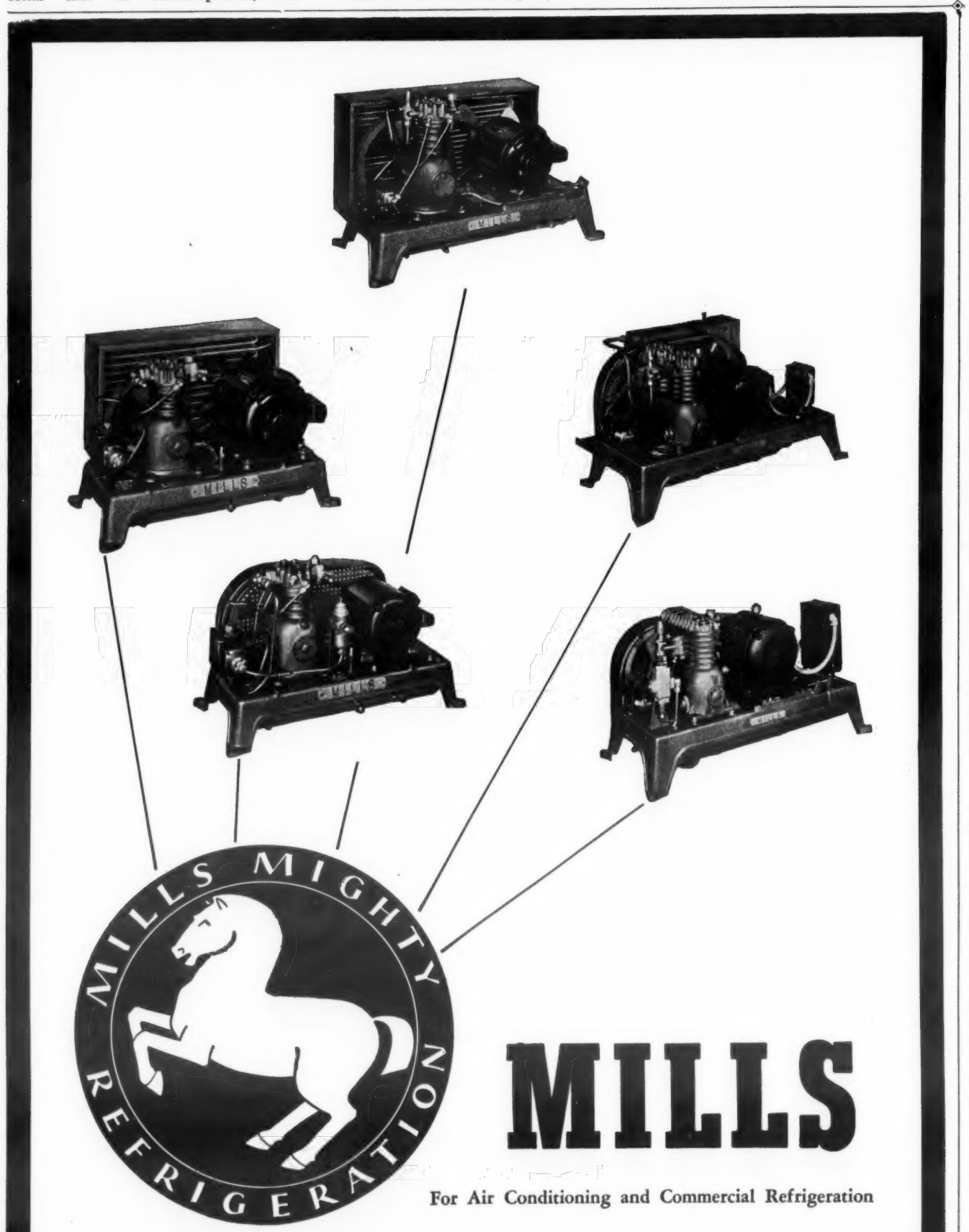
Fidelco Industries Announces Jobbing Setup In New York

NEW YORK CITY—Fidelco Industries, Inc., a division of Rocke International, which has acted as export agent for the past several years for a number of U. S. manufacturers of refrigeration and air conditioning equipment, has organized a domestic department and will distribute this equipment in a part of the eastern territory, reports Arthur Rocke, president.

Offices of the company are at 100 Varick St., in a two-story building containing approximately 10,000 sq. ft. of floor space. Lower floor is devoted to domestic stock. Territory to be covered by the company includes greater New York, taking in northern New Jersey, upstate New York as far as the Stamford line and up to Poughkeepsie, and Brooklyn and Long Island.

A staff of five men has been organized to handle the domestic department, with Douglas Pleasanton as managing sales engineer, and Russell Stringom and Walter Leissner covering the territory as sales engineers. Mr. Pleasanton, a graduate heating and ventilating engineer, has been with the company for 12 years.

Manufacturers whose products the new jobber will distribute in its territory include: Penn Electric Switch Co., Automatic Products Co., Ansul Chemical Co., Detroit Lubricator Co., Chicago-Wilcox Co., Bush Mfg. Co., Bonney Forge & Tool Works, Davison Chemical Corp., L. H. Gilmer Co., Henry Valve Co., Brunner Mfg. Co., Jarrow Products Corp., Kennedy Mfg. Co., Merchant & Evans Co., Mueller Brass Co., Perfection Refrigeration Parts Co., Prest-O-Lite Co., Ranco, Inc., Rotary Seal Co., Taylor Instrument Companies, The Texas Co., Turner Brass Works, White-Rodgers Electric Co.



MILLS

For Air Conditioning and Commercial Refrigeration

CONDENSING UNITS

A complete line including combination air and water cooled and gas engine driven units. Write—

MILLS NOVELTY COMPANY • 4100 FULLERTON AVENUE • CHICAGO

Preliminary List of Exhibitors For Show, Jan. 13-16, 1941

(LIST AS OF NOV. 25, 1940)

Acme Industries, Jackson, Mich. 41
Air-Maze Corp., Cleveland, Ohio 122
Alco Valve Co., Inc., St. Louis, Mo. 113–114
Allen-Bradley Co., Milwaukee, Wis. 149–150
All-Steel-Equip Co., Inc., Aurora, Ill. 112
Aluminum Co. of America, Pittsburgh, Pa. 326–327
Aluminum Industries, Inc., Cincinnati, Ohio 152
American Brass Co., Waterbury, Conn. 56
American Hard Rubber Co., New York, N. Y. 38
American Injector Co., Detroit, Mich. 133
Anemostat Corp. of America, New York, N. Y. 333
Ansul Chemical Co., Marinette, Wis. 77–78
Arcade Mfg. Co., Freeport, Ill. 1–B
Automatic Products Co., Milwaukee, Wis. 128–129
Betz Corp., Hammond, Ind. 65
Black-Sivalls & Bryson, Inc., Kansas City, Mo. 148
Bonney Forge & Tool Works, Allentown, Pa. 89–90
Brunner Mfg. Co., Utica, N. Y. 339–340
Bush Mfg. Co., Hartford, Conn. 131–132
Business News Publishing Co., Detroit, Mich. 110–111
Carrier Corp., Syracuse, N. Y. 34–35–36
Chase Brass & Copper Co., Waterbury, Conn. 97
Chicago-Wilcox Mfg. Co., Chicago, Ill. 115
Chill-Quick Co., Milwaukee, Wis. 60
B. H. Clark Co., DeKalb, Ill. 375
Commercial Coil & Refrigeration Co., Chicago, Ill. 6
Convention Binder Service, Chicago, Ill. 1–C
Copeland Refrigeration Corp., Sidney, Ohio 87–88
Curtis Refrigerating Machine Co., St. Louis, Mo. 7–8
Cutler-Hammer, Inc., Milwaukee, Wis. 107–108
Davison Chemical Corp., Baltimore, Md. 47–48
Day & Night Mfg. Co., Los Angeles, Calif. 84
Dayton Rubber Mfg. Co., Dayton, Ohio 4–5
Deepfreeze Div., Motor Products Corp., North Chicago, Ill. 27
Deissler Machine Co., Greenville, Pa. 334
Detroit Lubricator Co., Detroit, Mich. 62–63
Dole Refrigerating Co., Chicago, Ill. 81–82–83
Domestic Engineering Publications, Chicago, Ill. 323–324
Dry-Zero Corp., Chicago, Ill. 22
E. I. du Pont de Nemours & Co., Inc., Wilmington, Dela. 24
Durabilt Steel Locker Co., Aurora, Ill. 57
Electrimatic Corp., Chicago, Ill. 123
Fairbanks, Morse & Co., Chicago, Ill. 11–12–13
Fedders Mfg. Co., Buffalo, N. Y. 92–93
Gale Products, Galesburg, Ill. 106
Gates Rubber Co., Denver, Colo. 23
General Electric Co., Motor Div., Schenectady, N. Y. 58–59–60
General Electric Co., Air Conditioning & Commercial Refrigeration Dept., Bloomfield, N. J. 117–118
General Refrigeration Div., Yates-American Machine Co., Beloit, Wis. 310–311
L. H. Gilmer Co., Tacony, Philadelphia, Pa. 109
Grand Rapids Brass Co., Grand Rapids, Mich. 312
W. A. Hammond Drierite Co., Yellow Springs, Ohio 3
Heating & Ventilating, New York, N. Y. 99
Heating, Piping & Air Conditioning, Chicago, Ill. 374
Henry Valve Co., Chicago, Ill. 71–72
Howe Ice Machine Co., Chicago, Ill. 151
Iceberg Refrigerated Locker Systems, Inc., Chicago, Ill. 65–A
Ideal Beer Cooler Co., St. Louis, Mo. 98
Imperial Brass Mfg. Co., Chicago, Ill. 66–67–68
Jarrow Products Corp., Chicago, Ill. 1–A
Kason Hardware Corp., Brooklyn, N. Y. 37
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich. 145–146–147
Kerotest Mfg. Co., Pittsburgh, Pa. 75–76
Kold-Hold Mfg. Co., Lansing, Mich. 14–15
Linde Air Products Co., Unit of Union Carbide & Carbon Corp., New York, N. Y. 53
Marlo Coil Co., St. Louis, Mo. 154–155
Jas. P. Marsh Corp., Chicago, Ill. 73
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McCord Radiator & Mfg. Co., Detroit, Mich. 54–55
McIntire Connector Co., Newark, N. J. 70
Mills Novelty Co., Chicago, Ill. 39–40
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 137–138
Modern Equipment Corp., Defiance, Ohio 139–140–141
Mueller Brass Co., Port Huron, Mich. 120–121
Nickerson & Collins Co., Chicago, Ill. ..... A
Northern Indiana Brass Co., Elkhart, Ind. 125
Pacific Lumber Co., San Francisco, Calif. 45
Peerless of America, Inc., Chicago, Ill. 102–103–104–105
Penn Electric Switch Co., Goshen, Ind. 100–101
Perfection Refrigeration Parts Co., Harvey, Ill. 79
Portable Elevator Mfg. Co., Bloomington, Ill. 91
Quick Frozen Foods, New York, N. Y. 28
Ranco, Inc., Columbus, Ohio 142–143
Refrigeration Appliances, Inc., Chicago, Ill. 25–26
Refrigerating Engineering, New York, N. Y. 358–359
Rotary Seal Co., Chicago, Ill. 153
Russell Electric Co., Chicago, Ill. 130
Servel, Inc., Evansville, Ind. 136
Spoehrer-Lange Co., St. Louis, Mo. 119
Square D Co., Detroit, Mich. 94–95
Standard Refrigeration Co., Chicago, Ill. 69
Super-Cold Corp., Los Angeles, Calif. 345–346
Superior Valve & Fittings Co., Pittsburgh, Pa. 124
Swift Mfg. Co., Detroit, Mich. 74
Tecumseh Products Co., Tecumseh, Mich. 85–86
Temprite Products Corp., Detroit, Mich. 116
Texas Co., New York, N. Y. 350
Tuthill Pump Co., Chicago, Ill. 9–10
Tyler Fixture Corp., Niles, Mich. 61
United Refrigerator Mfg. Co., Inc., St. Paul, Minn. 322
Universal Cooler Corp., Marion, Ohio 42–43
Utilities Engineering Institute, Chicago, Ill. 127
Victor Mfg. & Gasket Co., Chicago, Ill. 96
Virginia Smelting Co., West Norfolk, Va. 126
J. H. H. Voss Co., New York, N. Y. 30–31–32–33
Wagner Electric Co., St. Louis, Mo. 18
Waukesha Motor Co., Waukesha, Wis. 372
Weatherhead Co., Cleveland, Ohio 336–337–338
Westinghouse Electric & Mfg. Co., Mansfield, Ohio 51–52
White-Rodgers Electric Co., St. Louis, Mo. 16–17
Williams Oil-O-Matic Heating Corp., Bloomington, Ill. ..... 21 & 144
Wolverine Tube Co., Detroit, Mich. 80

They'll Dance & Entertain Guests at All-Industry Banquet

* * *

'Better Than Ever' Is Promise

CHICAGO—"The swellest show I ever saw!"

That was the verdict of many a guest at last year's All-Industry Banquet, held in conjunction with the Second All-Industry Exhibition, after witnessing the floor show which followed the banquet.

BUT, "you ain't seen nothing yet," is the word that comes from M. W. "Mel" Knight, general sales manager of Peerless of America, Inc., chairman of the Exhibition Committee and the man who is again in charge of putting on the floor show.

"The show after the Banquet on Tuesday night, Jan. 14, will have more great acts than you can see at any two theaters or night clubs," avers Mr. Knight.

"The chorus gals will be prettier, the acts will be more breathtaking, and we're going to provide some thrills and surprises—

"—the BIG surprise," said Mr. Knight, "will be a real headliner, a nationally known star of stage, screen, and radio, the kind of person you may never have seen in person before."

Floor Show Takes Form—But Who Is the Star?

M. W. "Mel" Knight, general sales manager, Peerless of America, Inc., and chairman of the exhibition committee, is also in charge of the floor show at the All-Industry Banquet, Tuesday night, Jan. 14.

Mr. Knight is well-along with rounding up a series of acts that will give the Exhibition crowds a fast-moving, thrill-packed show.

The star of the show, a real headliner, remains Mr. Knight's secret. He will probably announce the name of the star just before the Exhibition.

HOW SHAKE HANDS WITH CHIEF FREEZE-UM

. . . THE NEWEST ADDITION TO THE CHIEFTAIN FAMILY

WE cordially invite you to meet a new member of our family—Chief Freez-Um. You'll find him a likable fellow.

Like all the rest of the Tecumseh gang, he aims to show you what a real welcome is like and if you'll step into our wigwam, Number 85 and Number 86 you won't be disappointed that you came to the show. When you stop in we will show you why 150 leading manufacturers standardize on Chieftain units and their products. Yes, there are many reasons for Chieftain's superiority, but the most outstanding reason is based upon the one word, PRECISION. This word should mean a lot to you for only through PRECISION in manufacturing can we sell such efficient units at such low prices.

PRECISION in manufacturing is only accomplished by using the latest types of machines for each operation and by frequent and rigid inspections of these operations.

• MEET HIM IN HIS WIGWAM

BOOTH NUMBERS 85 and 86 STEVENS HOTEL CHICAGO, ILLINOIS

LET US TELL YOU ABOUT OUR LATEST DEVELOPMENTS

Let us tell you of the new three step finish on all bores, including diamond boring, bearingizing and—a new refinement—micromatic honing of these surfaces.

Let us tell you about super finish—for example on crankshafts—where the limits are held so close that they can be measured only by electrical means. They have a long name for this instrument—the PROFILOMETER—it measures directly in millionths of an inch (micro inches).

Let us tell you of the new super inspection department where every part is again checked for accuracy after the regular inspection and selective fitting.

PRECISION—Will be demonstrated by actual parts.

NEW MODELS WILL BE ON DISPLAY

The new HERMETIC with static condenser—so compact that it fits in an unbelievably small space; so silent in operation; so changed in design that it is truly a 1942 model.

Also a complete line of completely sealed—tamper proof—hermetics for capillary tube or restrictor applications.

New improvements for the fractional horsepower conventional CHIEFTAIN units will be shown; smaller in overall dimensions; heavy duty design; improved appearance; and shrouded—if you prefer—at slight additional cost.

These are but a few of the reasons why you should visit our booth.

Chieftain

TECUMSEH PRODUCTS COMPANY

Tecumseh, Michigan

CANADIAN OFFICE:
Refrigeration Supplies Co., Ltd.
1127-31 Dundas St.
London, Ontario—F. A. M. Dawson

Mr. G. I. Boone
Suite 772, General Motors Bldg.
1775 Broadway, New York City, N. Y.

Branch Offices:

Mr. Marc A. Shantz
565 W. Washington Blvd., Room 314
Chicago, Illinois

Mr. D. J. Bowen
3913 Rawlins St.
Dallas, Texas

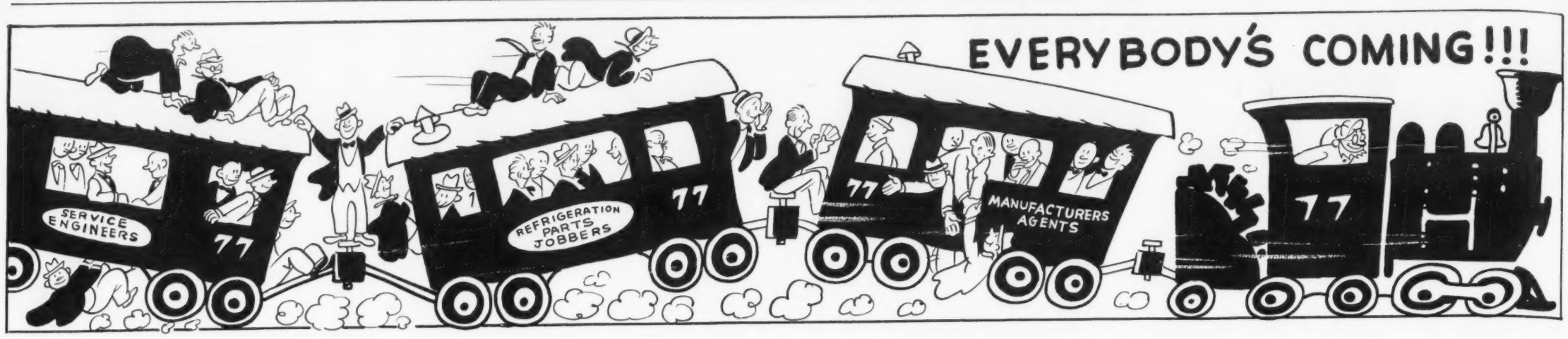
EXPORT DEPT.:
Tecumseh Products Export Dept.
1002 Palms Bldg.
Detroit, Michigan—E. C. Burgin

Mr. J. W. Beneke
593-595 Arcade Bldg.
St. Louis, Mo.

Mr. Gail Halliday
1526 Ivy Street
Denver, Colorado

Mr. J. A. McLaren
143 S. Alexandria
Los Angeles, Calif.

Mr. J. E. Parker
228 Second Street
Decatur, Georgia



An Idea of What Goes on At an All-Industry Refrigeration Show For the Benefit of Those Who Have Never Attended One

These Pictures Follow J. B. Venters, Who Operates a Refrigeration Sales and Service Firm In Jacksonville, Fla., Through the Second All-Industry Refrigeration & Air Conditioning Exhibition Held Last January At the Stevens Hotel In Chicago. They Are Published In This Issue To Provide an Idea of the Wide Variety of Activities, Both Educational and Entertaining, Engaged In By Those Attending the Exhibition.

Registration is quick, simple. After the registrant has indicated the branch of the business in which he is engaged, he gets his admission badge from the clerk. He can also buy his banquet ticket here.

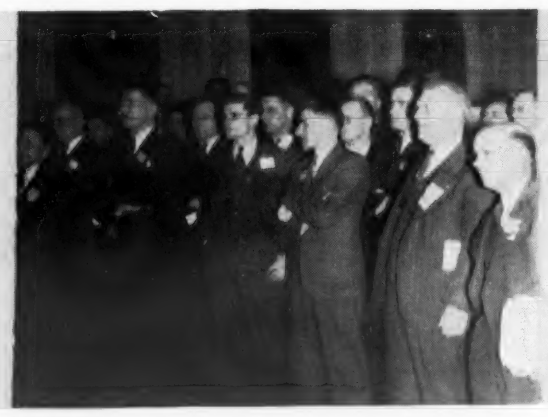
In the exhibition hall he goes to the Air Conditioning & Refrigeration News booth, gets the latest copy to find out what's happened to the industry while he's been on the way to the show.

At the booths he will meet old friends, and what is more important, many men in the industry whom he has wanted to meet, or with whom he may have corresponded for many years without ever meeting face to face.

He will find many of the exhibits entertaining as well as educational. And in many cases he will be welcomed at the booths not only by company executives but also by charming young ladies.

The exhibitors in many cases tell the story of their product with "sugar coating" such as the case here in which an expansion valve manufacturer's products are displayed in a shooting gallery background.

(Left) Since the All-Industry Exhibition fills up the Stevens hotel he readily makes himself to home amid the hotel's luxurious furnishings. (Above) Meetings held in conjunction with the Exhibition gain some of his attention, and he may win a prize.



(Left) He will find "good eating" within the hotel, won't have to venture outside for a thing. (Above) Meetings provide many entertaining and educational features, such as tube bending contests, etc., for which prizes are awarded (right).

(Above) Everything is informal, but his wife can bring along her new evening gown for the All-Industry banquet (if she wants to).

(Left) He'll see a great show at the All-Industry Banquet—a show that even the best nightclubs in the country can't match. The show will last for a couple of hours, and after that there is dancing—until unconscious. (Above) At the close of show each night there is gayety and good fellowship throughout the hotel, a chance to talk with the people you've been wanting to see, or to enjoy the fun of those who want to relax.

R. S. E. S. Invites All Service Engineers To Its Convention In January

Gordon Burns Sees Meetings & Show 'Outstanding Educational Opportunity'

By Gordon Burns, Toronto, Canada, President, Refrigeration Service Engineers Society

At the close of another busy refrigeration season we again find many things which have been shelved so as to permit the more urgent matters of the moment to be done.

To most of us engaged in the installation engineering and servicing of refrigeration equipment this busy season means many hours on the job leaving little or no time for the study of application of the new products which are constantly being added to our list of responsibilities.

It, therefore, becomes very important to us, as individuals, that we keep ourselves fully informed as to the new products offered to our buying public so that we may render the type of installation and service in keeping with this rapidly expanding industry.

Seven years ago a small group of refrigeration service engineers saw the necessity and the possibilties of improving their usefulness in their chosen field by getting together at a meeting at which time the Refrigeration Service Engineers Society was formed.

During these past seven years many chapters, both city and state, have been added where the service engineers could meet each other and where they could take their problems for free and unbiased discussion.

There had also been carried on a regular educational program covered by Lecture Courses prepared by leading authorities of our industry supplemented by personal talks by manufacturers' representatives.

The importance of the dissemination of such information in this way cannot be stressed too highly and it is the hope of the Refrigeration Service Engineers Society to enlarge the scope of this program during the coming year.

The outstanding part of such a program is our next Convention to be held in conjunction with the All-Industry Exhibition at the Stevens hotel, Chicago, Jan. 13 to 16 next.

At this Exhibition will be exhibited all the newest equipment which we will be called upon to install and service during the coming year.

There you will not only be able to view these products but you will also have an opportunity of meeting your fellow service engineers in a friendly and enjoyable setting to discuss mutual problems.

I know a sound educational program has been arranged and, therefore, extend to every service engineer, on behalf of the Refrigeration Service Engineers Society, a most cordial invitation to come and visit with us at this great show in Chicago.

To take in this big event in its entirety, including the added entertainment features that will be a part of the program, will, I know, repay you in many ways and will allow you to return to your business with a renewed and clear outlook on the year ahead in order that you may enjoy increased prosperity in 1941.

J. H. Driskell of Burley, Idaho Hasn't Missed A Show Yet and Is All Set For January

Idaho Electric Refrigeration
Burley, Idaho

The time has arrived for us of the refrigeration service field to make our plans to attend the annual Convention of the Refrigeration Service Engineers Society.

I consider it right and a privilege for men of a like thought and vocation to meet together in a fellowship of better understanding for the advancement of all. Beyond a doubt, the greatest educational feature of the convention is the exchange of ideas and experiences.

With education being the foremost thought, the program, with instructive papers, motion pictures, and visiting engineers, makes for a well rounded convention, and last but not least, the advance information on the new models and latest service tools is a boost to any meeting.

I value the R.S.E.S. Convention and the Exhibition enough that I have made four consecutive trips to Eastern Cities in the last four years and my plans are now complete to attend the Seventh Annual Convention.

J. L. DRISKELL

John Bush, president, New York State Association of Refrigeration Service Engineers (left), is shown with Edward Kellie, American Injector Co., speaker at a recent Buffalo meeting.

Kellie Talks To Buffalo Servicemen's Group

BUFFALO—E. A. Kellie, sales manager of American Injector Co., Detroit, was guest speaker at the first of a series of educational meetings sponsored by the Niagara Frontier chapter of Refrigeration Service Engineers Society.

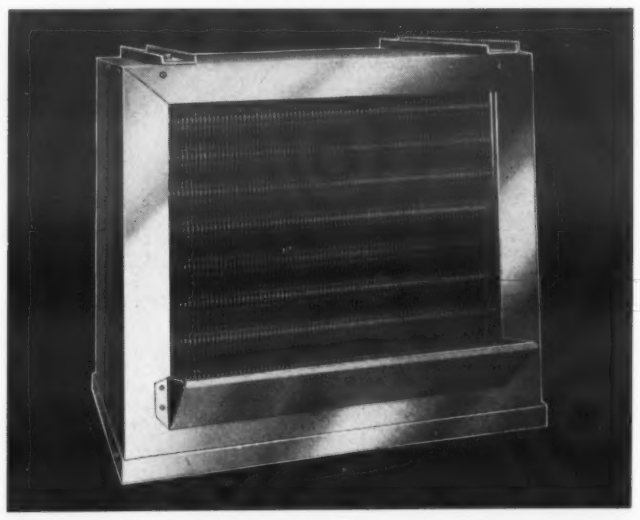
Speaking on the construction, application, operation, and service of oil separators, Mr. Kellie described the efficiency resulting from the use of this equipment, particularly in the evaporator, due to the removal of oil from the refrigerant.

Regarding applications of this equipment, Mr. Kellie said the ice cream industry is interested in the use of oil separators, because more constant temperatures can be held and the life of the compressor materially increased. He also devoted a considerable portion of this talk to suggestions as to how service men can sell more such equipment to their customers.

John Muller, president of the Niagara Frontier chapter, presided at the meeting. John Bush, president of the New York association, outlined plans for the state convention of the society in Albany on Nov. 29 and 30.

Follow the
LINE THAT LEADS TO
"COOLER PROFITS"!

BUSH "SUPREME" UNIT COOLER



BUSH "DEFROSTO" UNIT COOLER

Be SURE to visit the BUSH display at the All Industry Refrigeration and Air Conditioning Show. Penguin Pete and his gang of BUSH "Birds" will be there ready to explain the lineup for '41, with a complete array of products, including the "Defrosto" and "Supreme" Unit Coolers in actual operation. Here's your chance to get first hand information on BUSH engineering, advanced design, efficient performance, and unusually low prices. See for yourself why the BUSH line of coolers has been setting new sales and profit records for dealers everywhere.

REMEMBER — IT'S A DATE! The BUSH display, Annual All Industry Refrigeration and Air Conditioning Exhibition, January 13-16.

Main Office and Factory
HARTFORD . . CONN.
Chicago Office
610 N. OAKLEY BLVD.

Bush Mfg. Co.

COMMERCIAL COOLING UNITS by

PERSONALITIES

By George F. Taubeneck

To Make a World

Are you one of those individuals who enjoys "settin' a spell" in a railroad station waiting room, just to watch the people? Fascinating, isn't it? And you really come to appreciate, after your first hour there, that it "takes all kinds of people to make up a world."

Editing an industry's newspaper gives you somewhat the same feeling. An industry the size of this one, with all its various branches and ramifications, is quite a little world in itself. And what a richly varied assortment of people it contains!

After you've been around as long as Phil Redeker and I have, you begin to note how the pattern of people repeats itself. Phil claims he can "spot a phoney a mile away" now. And both of us have come to appreciate certain qualities in a man which, invariably it seems, result in his rising to the top of the heap and staying there.

* * *

Nobleman

Over in England (yes, still!) an Earl is a nobleman. We have an Earl in this industry who is a nobleman—one of Nature's noblemen—too. He is Earl Vallee, vice president of Automatic Products, up in Milwaukee.

The thing that has always struck us about Earl Vallee is his utter honesty. He shoots square, and deals 'em from the top of the deck. You hear a lot of gossip in this business (some of it untrue, and much of it exaggerated) but we have yet to hear that Earl Vallee ever tried to skin anyone or pull a shady deal of any kind.

Evidence of the respect with which he is held in the industry is the fact that he is not only President of Rema (Refrigeration Equipment Manufacturers Association) but that everybody thinks he ought to be. Often after a man has held high office for a little while, people begin to get critical of him. (Ask Franklin D.) He is a target. He loses friends. He makes enemies. But not Earl Vallee. Even his competitors agree that he is doing a great job, and are glad he has the office.

Incidentally, when you come to see the All-Industry Exhibition in Chicago next January, Mr. Vallee will be very much in evidence as official Host. Among other things, Rema is proud of the fact that Earl looks the part. His manner, bearing, and appearance are everything that a president should have.

* * *

Up In the Air, with Feet on the Ground

Another man who is "every inch a president" is the youthful-appearing Jerry Tyler, president of Tyler Fixture Co., Niles, Mich. Jerry will show up at the All-Industry show, too. He has recently been elected president of the Commercial Refrigerator Manufacturers Association.

Jerry is credited with being the man who revolutionized the production of refrigerated display cases. He had the courage to make them of welded steel, on an assembly line basis, when engineers and designers were still insisting that the fabrication of commercial refrigerators was—and always should be—a carpentering job, calling for skilled and experienced workmen.

When Jerry Tyler first got his welded steel cases rolling off a production line, he began advertising them in the NEWS, using large space. Some of his competitors became so angry at that that they threatened to cancel their contracts if we accepted any more of his advertisements.

But we visited his plant, checked tests on his products, and saw that he knew what he was doing. Time has proved that he was right; and now Jerry Tyler, instead of being an object of (1) ridicule and (2) commercial hatred, is now president of the Commercial Refrigerator Manufacturers Association.

We do not regard the conferring of this honor upon Jerry so much as recognition of the fact that he was right about the adaptability of line production methods to commercial refrigerator manufacturing, as it is recognition of his qualities as a man.

Like Earl Vallee, he is a man whose word can be depended on, who deals 'em on the level, and who has the respect even of his most aggressive competitors.

Often you hear it said that he is a "young man with his feet on the ground." Yet flying is his hobby. He flies his own plane, and flies it well. He flies it on business trips, and for pleasure, too, and can alight almost in his own backyard.

Not long ago we were discussing a matter over the long distance phone when he said: "Say, let's really get down to cases on this thing. I'll be in Detroit before you've finished reading your mail."

The mail was quite heavy that day, and Jerry almost made it.

* * *

They Come and They Go

Awhile back we mentioned that after watching the passing parade for a decade on an industry newspaper, you get so you can "spot" certain qualities in a man, or in a group of men, which nearly always result in their holding positions of responsibility over the "long pull."

You see lots of men flash across the horizon. Some of them are pretty clever. But not all of them stick around long enough for you to become really acquainted.

Just about the time you have established working relations with one, you walk in one day and find that there's a new name on the door of his office. The mortality rate is high in this industry, a fact which is sometimes quite discouraging to those who have to keep in close contact with key men in every branch of the industry.

Of course, the fact that a new name is on the office door does not necessarily mean that the old name is out of the picture. Often he has moved over to a competitor at a fancy salary. Proselyting seems to be one of the favorite occupations of this industry.

Too, an exceedingly capable man may find it desirable to resign because of personal reasons, or because he finds his forward progress stymied through no fault of his own.

The industry needs such men, and their friends generally see to it that they get relocated. That's a little task with which the NEWS has often had something to do. We hate to see a good friend move into another line of business.

* * *

When Sidney Was a Ghost

There's one group of executives which has moved around the industry quite a bit—and nearly always as a unit—which has never needed our good offices at all, or those of other friends.

And, for some time now, they've headed up their own company. Today these men—Harry Thompson, Frank Gleason, W. G. von Meyer, Otto Buschmann, and C. L. Curtis of Copeland—are operating one of the most successful manufacturing operations in the country.

They have three plants going full blast over in Sidney, Ohio, turning out commercial refrigerating machines, household refrigerators, and refrigeration equipment for the Navy. And they're making money. They, too, have so many personal friends of long standing in the industry that not even their keenest competitors begrudge them the success they so richly deserve.

The writer can recall one bitterly cold night in December, 1937, when he arrived at the little town of Sidney after a tough drive through a swirling, Ohio snowstorm.

Frank Gleason had phoned that he and his partners were about to close a deal with Dallas Winslow for the purchase of the Copeland Refrigerator Co., and thought I'd like to be there to get the story first-hand.

By the time of our arrival the deal had been closed, and the above-mentioned gentlemen, together with the charming and leisurely Mr. Winslow, were relaxing in one of the most godawful hotel rooms you ever saw.

But Thompson, Gleason, et al were far too elated over their deal to notice their surroundings. They envisioned a great opportunity, and boy! how they have realized it!

At that time Copeland had little else but a good name. They were going to move it from Detroit to this little ghost town of Sidney which, at that time wasn't even walking in its sleep—it was just sleeping.

But the boys found plenty of skilled mechanics hibernating on the surrounding farms, and they kept their overhead low. They knew refrigeration, they knew manufacturing, and they knew selling. Slowly they infused some warmth in Sidney. You should see it now.

* * *

A Good Name Is Worth More Than Rubies

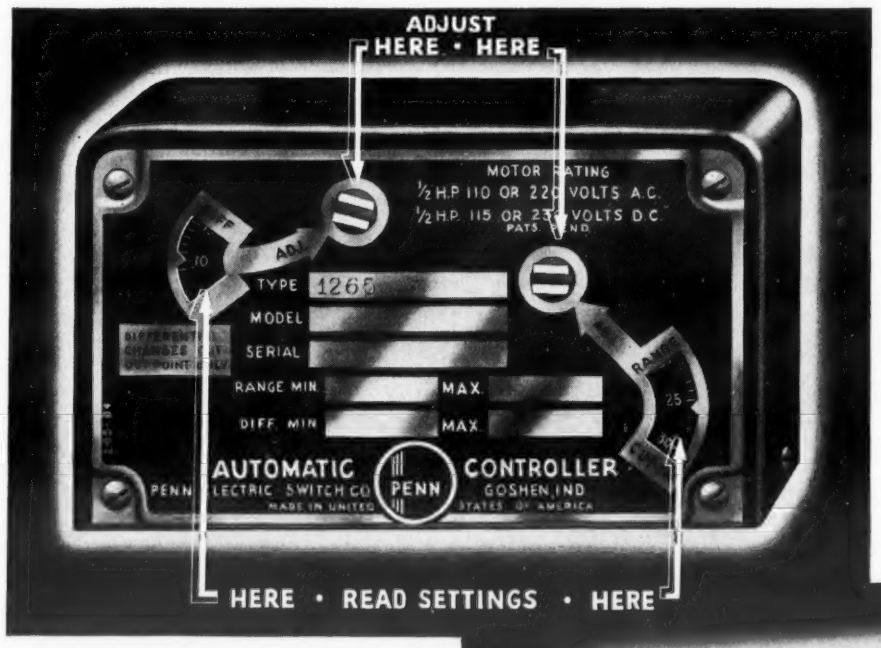
Today it claims to have less unemployment than any comparable industrial city in the nation, with a number of thriving heavy industries. Right across the street from the Copeland offices is a busy locker storage plant. Downtown merchants show fine goods in their windows. New houses have been going up at a record rate. The town is thriving as it has never throve, and they cheerfully give the credit to Copeland for a blood transfusion which brought it out of its lethargy.

Incidentally, a corporation can, by

(Concluded on Page 15, Column 1)

Penn Offers Features to Fit

Accurate, Full-Range Visible Scales



Almost no two refrigeration installations are exactly alike. Even when the pieces of equipment are identical, the likes and wishes of various customers will make the jobs different. Nobody knows this better than the refrigeration service engineer.

Add to the whims of users the great variety of new and improved types of refrigeration and cooling equipment. The answer is: A problem in automatic control that would perplex the best of installation engineers, if the job had to be done with the controls available only a few short years ago.

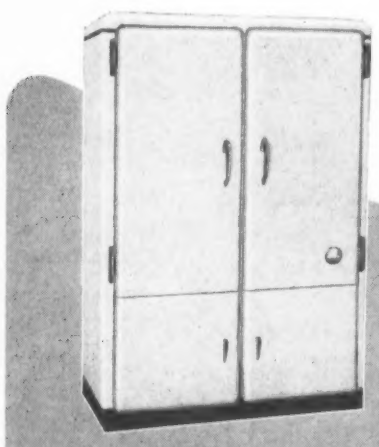
New Controls Mean Progress

There are no annual models in Penn Refrigeration Controls. Constantly, improvements are being made and new designs announced, always in step with the growing demands made on refrigeration equipment. Newest of these pressure and temperature controls in the Penn line are the

265 and 1265 Series

Here is a complete new line of compact, sturdy semi-commercial controls for water coolers, beverage coolers, ice cream cabinets, and other applications to ½ H.P. A.C. or D.C. to 230 V. Design and application features are covered briefly on the next page. Take a few minutes to study these new Penn Controls.

Illustrated above is nameplate view of Penn 1265 Series Control, with visible range and differential adjustment scales. At right is view of 265 Series Pressure Control. Note streamlined compactness.



12 TO 71 CU. FT.

MOST COMPLETE 'REACH-IN' LINE ON THE MARKET!

Here's the widest selection of sizes and styles the industry affords—a model for every need. Distinguished by superb styling, fine construction and outstanding value.

Model 120 (above) has 12 cu. ft. capacity—the newest member of the "Midwest 'Reach-in'" family.

Model 700 (right) another new model has 71.5 cu. ft. capacity. In between is a full range of sizes and equipment. Write for full details now.

★ ★ Midwest MFG. COMPANY
Galesburg, Ill., U.S.A.
Export Division, Merchandise Mart, Chicago

Personalities—By G. F. Taubeneck

(Concluded from Page 14, Column 5)

exercise of the same qualities of character that give individuals a top rating, achieve a reputation which will survive a lot of shocks.

As the Bible says, somewhere in Proverbs: "A good name is rather to be chosen than rubies (or great riches)."

Copeland is an excellent case in point. Never a big company, it had always enjoyed a great reputation. After Louis Ruthenburg left it, however, it began to die on the vine; and eventually Dallas Winslow was able to pick it up for a song.

Mr. Winslow was known as a salvage expert. He took ailing properties—of which there were about as many at that time as there were sidewalk apple merchants—and liquidated them, at a profit.

But he found, to his surprise, that Copeland didn't liquidate very easily. It kept bobbing back as a going concern. Demand for its products was still strong. And so when the Thompson-Gleason group came along, he was glad to turn it over to someone who knew how to operate a business that just didn't seem to want to liquidate. Mr. Winslow, of course, "got his."

* * *

Men Who Know How To Get Results

Speaking of ailing properties, nearly everybody recognizes what the advent of **men who know how to get results** did for Servel, one of the oldest and biggest manufacturing firms in the refrigeration industry.

As all pioneers do, Servel had its ups and downs in the 1920's. But ever since the aforementioned Louis Ruthenburg became president, it has bloomed and prospered.

Financial statements of some of the biggest operators in the refrigeration field, such as Frigidaire, General Electric, and Westinghouse, lie buried in the overall statements of the mighty corporate empires of which these refrigeration divisions are a part.

But of all the concerns in this business whose financial statements are get-at-able, Servel has for many years led in profits earned. Many believe that Servel earns the biggest profits of any refrigeration firm.

Some time ago I was reading "Call to Reason," by Axel Wenner-Gren, the Swedish capitalist. Now Mr. Wenner-Gren is a former chairman of the board of Servel, and is still its largest stockholder. So it's easy to identify the man he talks about in the following paragraphs as being Louis Ruthenburg.

"I have before me some illuminating figures dealing with the activities of an American company with which I became closely associated in 1933.

"Prior to that date, the company had employed several thousand men but had been operating at a loss. The stockholders had never received a dividend. The problem was to turn this undertaking from a losing into a paying proposition.

"A most efficient man was placed in charge, who was able to procure experienced and capable assistants and to so coordinate their work that all departments could be reorganized simultaneously, and brought into closer collaboration.

"A considerable amount of capital had to be invested. In addition, a substantial sum was expended in research and experimentation, resulting in a much improved product.

"From 1933 to 1937, the index of the cost of living in the United States (as compiled by the Federal Reserve Bank of New York) increased from 74.4 to 88.1 a net increase of 18.41%.

"In this enterprise, however, it became possible to increase the average rate of wages of the employes by 56.76%, thus effecting a real improvement of 32.38% in their living standard.

"The actual selling price of the company's products was reduced during this period by 14.9%. Due to increased production, the number of employes was doubled and the factory man-hours were more than doubled.

"The company operations began to show highly satisfactory profits, notwithstanding the fact that taxes mounted from a comparatively insignificant sum to approximately $2,800,000 in 1937, exclusive of taxes paid by stockholders and employes."

* * *

Experience Plus Good Judgment

One of the tests of a good executive is his ability to pick good men, keep them happy, and get the most out of them. That is something at which Louis Ruthenburg has always been especially adept.

Harry Newcomb, who runs the commercial refrigeration department of Servel, is a man of broad experience whose calm demeanor under stress is born of confidence in the effectiveness of his judgment.

We don't mean to imply that Harry is one of these cold, fish-eyed, bloodless mental marvels who sometimes run a big outfit in the best Prussian manner. Harry is really an all-right guy, as approachable as the corner cigar store man, and thoroughly at home in the typical American community of Evansville.

Two of Harry's right arms, Bill Aulsebrook and "Terry" Terhune, are also all-right guys, whom everyone likes and gets along with easily, and yet who have proved down through the years that their judgment is like money in the bank.

All three of these fellows have been yarned-about many times in this column in the past.

* * *

They Look the Part Of Presidents

Earlier in this rambling discourse on men you'll meet at the 1941 Refrigeration and Air Conditioning Exhibition in Chicago next January we mentioned a couple of men who really look like presidents: Earl Vallee and Jerry Tyler.

There's another nominee for such ranking who'd undoubtedly get a rising vote-by-acclamation for honor as a Man Who Looks the Part. He is R. W. "Dick" Kritzer, president of Peerless of America, Inc.

Like a lot of people around this industry (including most of the staff of AIR CONDITIONING & REFRIGERATION NEWS), Dick Kritzer is a graduate of the University of Illinois.

That means that he has his homespun side—a side which makes for easy comradeship, for thumb-in-galluses, common-as-an-old-shoe Americanism.

But his sojourn at "America's greatest cow college" did not prevent him from becoming a gentleman distinguished and polished in appearance as well as manner—a pretty smooth article in any league, if you ask us.

Back in 1929 when the writer was a cub reporter, brash enough to dig up hush-hush stories the publication of which raised high temperatures underneath certain brass hats, Mr. Kritzer openly and effectively defended our right to get and write the news as it was, and not as the brass hats would have had it.

From that moment until this we have never seen him fail to uphold a high code of ethics.

Incidentally, he took a little local business back there in the late twenties, and made an international concern out of it, a concern which has size, stability, and plenty on the ball today.

* * *

An Industry of Young Men

During the fall meeting of the Refrigeration Equipment Manufacturers Association, Philip Gott of the national Chamber of Commerce headquarters (who had made a most interesting address at the Rema meeting) had to catch a train East.

French Lick, Ind., beautiful site of this meeting, is about 40 miles from nowhere; and the only way Mr. Gott could get to a railroad whistlestop and flag a train was for someone to drive him. The writer was elected, for which he will be eternally grateful, because Mr. Gott is a most interesting man, indeed.

During the course of our drive to Mitchell, Ind., he repeatedly marveled at the youth of the executives he had met at this Rema meeting.

"I just can't get over it," he would say. "I've never seen anything like it! Why, there were company presidents there in their thirties, and nearly everyone there had a full head of hair!

"Most of these industry associations—and I visit lots of their conventions and conclaves—are composed of men of advanced years, of sober mien, and weighty presences. The youth and vitality of this crowd is amazing!"

* * *

Wim, Wigor, and Witality

He was absolutely right, of course, as you will notice when you come to the Exhibition. Take Mel Knight, Peerless sales manager, and general chairman of the Exhibition.

Mel is just a young feller, somewhere in his early thirties, who dashes about and gets things done with such dispatch that you'd think he was still in his early twenties. And when he puts on a show, mister, you see a show! Nothing dull, nothing fuddy-duddy, but action every minute!

There's Paul Penn, tall, energetic young hustler from the Penn Electric Switch Co. You'll never meet a nicer fellow, and you'll never see one who gets more done. He's in his early thirties.

Art Schellenberg, president of Alco Valve, and often mentioned in this column, is under 35 and looks under 30. Has a long, cool head on him, but doesn't try to impress you with the fact.

Jim Hood, treasurer and leading spirit at Ansul Chemical Co., is another young man of proved executive ability. Len McKesson, one of Hood's right arms, is another very young man who knows what he's doing. Incidentally, this column owes Len a dollar, payable at the Exhibition. Come around to our booth and watch him try to collect!

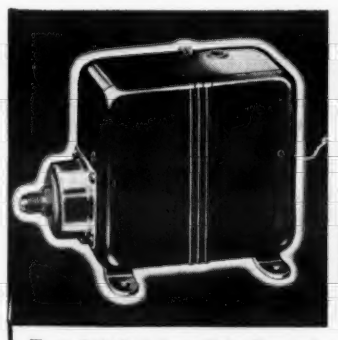
(George Benton of Minneapolis-Honeywell will also be around to collect a bet. We have the darndest luck!)

Charley Gary and Guy Henry of Henry Valve have successfully nurtured a young business in a tough competitive field, and they, too, have had the stamina and eagerness of youth to call upon when the climb was hardest.

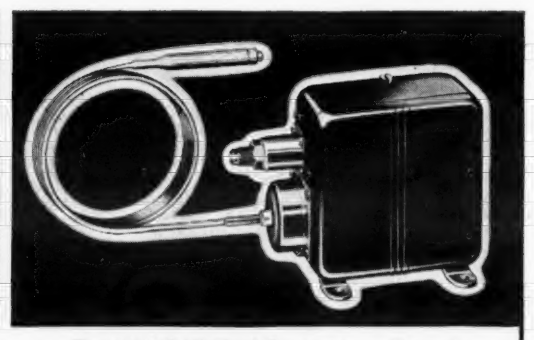
Jim Strachan of Kerotest, Charlie Benson of Imperial Brass, Jack Colyer of Wolverine Tube, Jack Forbes of Superior Valve, "Brownie" Brown and Frank Smith of Tecumseh, Tom Pendergast of Universal Cooler, Eddie Graff of Ranco, and many others (we're running out of space, we see) could be mentioned in this classification of young men who have Gone Places, and who are Still Going.

Every Installation Problem

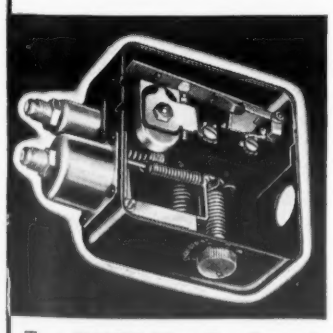
Newest Addition to Control Line . .



Type 260AP01 Low Side Control



Type 261AT01D Dual Temperature Control



Type 261AP03 Meat Box Control

260 Series for Commercial Service

Penn 260 Series temperature and suction pressure controls and 261 Series dual pressure and temperature controls offer a wide choice of models for all applications to and including 1 H.P. A.C. or ¾ H.P. D.C. Incorporate same basic magnet contact structure so widely and successfully used for many years on Penn Type L Controls. Wide choice of adjustment and installation features. Get Bulletin R-260B for details.

★

Small—but Roomy

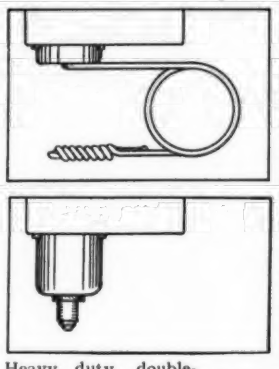
In a constant effort to build refrigeration controls smaller and more compact, service engineers have come to expect crowded quarters for wiring and adjustments. With the Penn 265 and 1265 Series, *things are different!* Lift the cover off one of these controls and you have complete access to the front and two sides. Conduit or BX adaptor connections are easy. Wiring terminals are "wide-open," large and with sturdy wire stops. Adjustments are equally accessible on all 265 Series Controls and . . . on 1265 Series Controls, adjustments are "out in the open" on the nameplate side of the control. Here is a refrigeration control that is accurately calibrated, both for RANGE and DIFFERENTIAL—*you can set it on the job and leave it!* For both pressure and temperature.

Built small in both 265 and 1265 Series for limited space mounting. Choice of mounting methods (see column at right). Built with an ingenious combination of magnet contact structure and toggle action for perfect operation under vibration. Heavy duty, electrolytic silver, double break contacts.

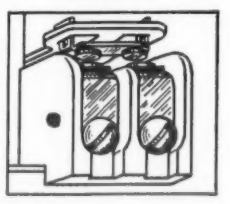
Write for FREE catalog on Penn controls, or for information on any refrigeration control problem. **Penn Electric Switch Co., Goshen, Indiana. In Canada: Powerlite Devices, Ltd., Penn Electric Switch Division, Toronto, Ont. Export: 100 Varick Street, New York City. Branches, representatives and distributors in all principal cities.**

Some features of new 265 & 1265 Series

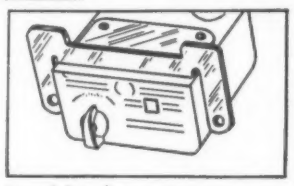
Service engineers and equipment design engineers have given Penn 265 and 1265 Series Controls widespread approval.



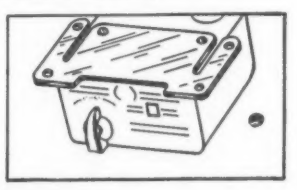
265 and 1265 Series Controls are available for both suction pressure and temperature service. Standard temperature element for clamp-on or liquid immersion is shown at left, above. Available with cross-ambient bulb and also with fin-type bulb for air temperature control. Standard pressure bellows is shown at left, below. ¼" S.A.E. compression fitting.



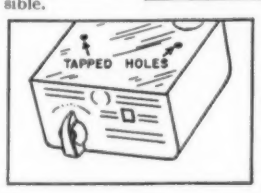
Heavy duty, double-break bridge type contacts are shown at right. Note stationary contacts mounted directly on "U" type terminal brackets, which are arranged in recesses on a molded bakelite block, simplifying wiring and eliminating possibility of shorting between terminals.



265 and 1265 Series Controls may be mounted in any position. At left is shown bracket for flush front or panel mounting.



At right is shown flat mounting bracket, to fit practically all miscellaneous mounting problems. Mounting holes completely accessible.



Many original equipment buyers prefer direct mounting of control, by means of tapped holes in case, as shown at left.

★

More information on what Penn Controls will do for you—One of a Series.

PENN

Penn-Built Controls for Many Applications

Thermostats, Bonnet Controls, Ductstats, Fire Protection Controls, Water Temperature Controls, Boiler Pressure Controls, Boiler Water Level Controls, Stack Switches, Humidistats, Stoker Timer Relays, Solenoid Gas Valves, General Purpose Relays, Solenoid Refrigerant and Water Valves, Refrigeration Pressure and Temperature Controls, Water Valves, Pump Controls, Air Compressor Controls, Air Volume Controls, Line Starters.

DOING ONE THING WELL

BOOTH 70 **DFN** AT CHICAGO

SYSTEM

DEHYDRATORS—FILTERS—NEUTRALIZERS—STRAINERS
OF ADVANCED DESIGN AND CONSTRUCTION

EFFICIENT—ADAPTABLE
ENGINEERED TO MODERN EXACTING REQUIREMENTS

stocked by all leading jobbers

McINTIRE CONNECTOR COMPANY
NEWARK, N. J.

Supply Jobbers Association Outlines Tentative Program For Convention

ST. LOUIS—Tentative program of the annual convention of the National Refrigeration Supply Jobbers Association Jan. 13-15 at the Stevens hotel in Chicago shows that it will be loaded with association business, which will include discussions of industry policy.

This was revealed in the preliminary program announcement made by H. H. Hubbell of Brass & Copper Sales Co., St. Louis, chairman of the program committee. Other members of the committee are H. W. Merkel, The Merkel Bros. Co., Cincinnati; Walter Schroeder, Pacific Metals Co., Ltd., San Francisco; and H. W. Blythe, H. W. Blythe Co., Chicago.

On Monday, Jan. 13, the jobbers will meet for luncheon only, in order that the members may spend the balance of the day inspecting the exhibits at the Refrigeration & Air Conditioning Exhibition.

Monday, Jan. 13, 12:30 p.m.

Opening luncheon open to all jobbers and manufacturers regardless of any association affiliation, followed by a talk on "The Wholesaler (Our Partner in Business)" delivered by a prominent executive of the east. There will also be some very short talks by the presidents of Rema and N.R.S.J.A. Immediately following these talks the jobbers will adjourn.

Tuesday, Jan. 14, 9:00 a.m.

Opening meeting of the N.R.S.J.A. with a talk on "Cost Analysis" by Howard H. Hubbell and reports of committees.

12:30 p.m. A luncheon for N.R.S.J.A. members only.

On Tuesday afternoon there will be an address on "The Future of the Refrigeration Supply Jobber" by one of the members of N.R.S.J.A., and additional business and committee reports.

Wednesday, Jan. 15, 9 a.m.

After opening there will be a talk made by Oscar Iber of the O. Iber Co., Chicago, on "Credits." Further committee reports, election of officers, and adjournment at 12:30 at which time there will be a joint meeting of N.R.S.J.A. and Rema.

Electromotive Corp. Men Hear H. G. McLaughlin

DALLAS, Tex.—H. G. McLaughlin, sales manager of Temprite Products Corp., Detroit, discussed new developments in water and beverage cooling when he spoke before a special meeting of the sales and service men of Electromotive Corp. here recently.

Hovey, N.R.S.J.A. Secretary, Explains the Benefits of Trade Association Membership

By Fred B. Hovey, Executive Secretary, National Refrigeration Supply Jobbers Association

A fact of first importance in considering trade associations is the rapid growth of trade associations in recent years. Fifty years ago there were very few trade associations, but now almost every trade and industry is served by its trade association.

In a recent address Earl Constantine, a trade association executive and a recent president of American Trade Association Executives, commented on the present need of trade associations, saying:

"Personally, I feel that if we did not have a trade association or a business association in a given line of business, such as we do today, we would have something else that would perform the very same function.

"As industry and government develop and become more complex, their points of contact increase in number and their relations become more involved. This situation creates a series of continuing problems which cannot be solved by even the wisest individual—problems which are beyond the biggest corporations in the land. In fact, the size of a corporation often makes it all the more a target.

"Out of these conditions arises the necessity for some kind of an instrument which shall perform the important function of bringing together two or more persons to deal jointly on their common problems."

The service of a trade association may be divided into two divisions, tangible services confined as far as possible to members and the intangible service of representing the trade before the public and the government and improving the basic conditions within the trade or industry. Mr. Constantine's comments on the services of trade associations are in part as follows:

"There are two divisions into which the work of a business association may be divided. On one side are those activities which satisfy the needs of many of our members and which constitute direct, tangible services. That class involves statistical work, credit and collection services, etc. On the other side is another field of service which, at least in my opinion, is even more important than the tangible services. I refer to the intangible services the association renders.

"To a great extent, these intangible services are educational in character. Many in both public and private life today are trying to get others to believe that the trade association is a very narrow, ingrown sort of thing, intended to render only the most selfish service to a select few who happen to be on the inside. There are some associations that do perform in this manner, but they are few."

However, many a business man cannot visualize the intangible services of a trade association as readily as its tangible services, and therefore a trade association should put special emphasis on its tangible services.

A service rendered by many trade associations which perhaps should be classed as an intangible service is the making available to members information of the trade through conventions at which competitors and their suppliers can meet as friends. The information obtained from the discussions on the programs and from discussions with individuals at such conventions is often helpful. Among such items of information are better management methods, store displays, new and salable merchandise, etc.

The tangible activities that a trade association should render to its members will vary because in one trade a service may well be rendered by private enterprise while in another trade the same service is not available. As a specific instance, commercial credit agencies do not rate physicians and hospitals, and the trade association of those selling doctors and hospitals has found the compiling of credit information on doctors and hospitals through the association of great value.

One tangible service that has proved of great value to trade associations is the compiling of statistics for the trade—for groups of manufacturers, compiling costs of production—for distributors, compiling costs of distribution.

American business is still conducted by private enterprise and dependent on obtaining a profit for its continued existence. Unless a business man knows his actual costs of doing business he may not be in a position to fix his selling prices so as to cover his overhead and assure him of a reasonable net profit.

A trade association is a means for harnessing those in a trade or industry so that they may exercise their joint strength for their mutual betterment. If those in a trade association will exercise their strength such a trade association is certain to be beneficial.

How A Parts Jobber Sells His 'Function' To the Trade

DENVER, Colo.—Headed by "It's Good Business To Buy from the Refrigeration Supply Jobber" and carrying the emblem of the National Refrigeration Supply Jobbers Association, a card-sized printed promotion piece promoting the services of the refrigeration parts jobber is being used by the McComb Refrigeration Supply Co. of this city.

The piece has the following to say:

"He acts as your buyer, offering you carefully selected, nationally known, quality merchandise, backed by the manufacturers' guarantees and his own.

"One source of supply saves you time and money. Your mechanics make money for you out in your shop—not out shopping.

"Your jobber gives you prompt delivery, intelligent phone and counter service on whatever you need, whenever you need it.

"His specialized knowledge helps you to obtain the utmost in service and value.

"He extends credit courtesies and makes reasonable adjustments quickly.

"He and his salesmen give you merchandising ideas that help you get more business."

IF IT'S CONTROL YOU WANT..!

for TEMPERATURE

for PRESSURE

White-Rodgers uniformly calibrated dials, broad ranges, positive hydraulic action, high current ratings and ease of installation are offered in controls that fill every refrigeration need.

A postcard will bring complete data explaining exclusive advantages of White-Rodgers Controls—advantages which make them the choice of refrigeration men everywhere.

TYPE 1629

Hydraulic Action Temperature Control. Selective Range Adjustment covers any 10° within the total range of 20° to 75° Fahrenheit. Remote type bulb—8-foot flexible capillary.

TYPE 1535

Selective Range, Low-Side Pressure Control with lever adjustment. Any portion of the total range (25 inches vacuum to 30 lbs.) may be selected by the installer to permit adjustment by the user as load or weather conditions demand.

Controls for Refrigeration · Heating · Air Conditioning

WHITE-RODGERS ELECTRIC COMPANY

1211k CASS AVENUE • SAINT LOUIS, MO.

AIR CONDITIONING UNITS by KRAMER

• COMPLETE RANGE
• SOUNDLY DESIGNED
• ACCURATELY RATED

Write For Bulletin AC-440

KRAMER TRENTON CO., Trenton, N. J.

Philadelphia Jobber Tailors His Business To Fit Each Customer's Specific Needs

By Robert M. Price

PHILADELPHIA—Alex Holcombe, head of Victor Sales & Supply Co. here has his own idea on how to run a refrigeration parts and supplies jobbing business. He maps his sales plans from these ideas that grew out of the experience he has had since he hung out his jobber's shingle on Jan. 1, 1934.

Instead of trying to make his customers fit the business, Mr. Holcombe fits the business to the customers with a personalized approach. He studies each customer and prospect to find out what type of operation he has, what supplies he uses, what he may need, and what service can be offered to him. He "knows" his customers.

Because of this personalized approach, he does not make up one catalog to be sent to a general mailing list. Each customer whose business warrants it receives a special catalog which is especially designed for his use. This catalog contains data on the items this customer can normally be expected to use. This "specific" catalog now goes to about 90 customers.

A general catalog goes to customers who do not fall into the "specific" class. The customer list is regularly checked so that when a customer is considered ready for a special catalog, one can be made up for him. Even this general catalog does not go to the casual drop-in customer.

"I believe that 50% of my customers don't need a catalog," Mr. Holcombe said. "A great many of them know as much about what I carry as I do. The big customers usually know exactly what they want, and they receive plenty of manufacturers' catalogs. A catalog sent to this type of buyer would not be particularly useful."

Instead of putting all his promotion effort into the catalog, Mr. Holcombe distributes many advertising novelties which are aimed at keeping the firm's name before the customer or prospect so that when he is ready to buy he will automatically think of Victor Sales & Supply.

These novelties include key holders, pencils, and calendars—each with the name of the firm in a conspicuous place.

"That calendar was the biggest sales puller we ever had," Mr. Holcombe said. "A man puts it up on his wall and it stays there all year.

"Another very good item is a memo pad. When a man gets ready to order and that memo pad—with our name on it—is near the phone, we can be pretty sure he won't forget us.

"This type of advertising is cheap and effective," Mr. Holcombe continued. "If I thought a general catalog mailing would bring more business, I'd be crazy to keep throwing out these novelties. But for my type of operation, this type of advertising has proved to the best."

For several years the firm covered a large territory, but after several years of experimenting, a restricted territory was decided as the best bet. Within that area it is easier to carry out the "personalized approach" method, Mr. Holcombe explains.

From about Oct. 1 to the start of the next year's heavy refrigeration season, Victor Sales & Supply Co. salesmen are on the road contacting every customer and prospect. These trips are largely missionary excursions to get to know each customer better, to talk over his problems, show new items, and to discuss catalog needs, if the customer is in the "specific" class. This close follow-up is another reason for eliminating the general catalog mailing, Mr. Holcombe stated.

A concentrated effort is made to build up the service man's selling of replacement parts and new items. Especially during the winter months, special items are plugged as leader items for the service man.

Recently a special control was featured. Signs in the store invited service men to find out more about the item—and pointed out the sales opportunities.

"Another good thing about promoting sales of this kind—particularly in the winter—is that if the service man does a good job with the item you feature, he is bound to sell other things," Mr. Holcombe continued, "and this helps to even out the dips in the off season."

Idea Man

ALEX HOLCOMBE

Alex Holcombe Takes the Customer's Point of View

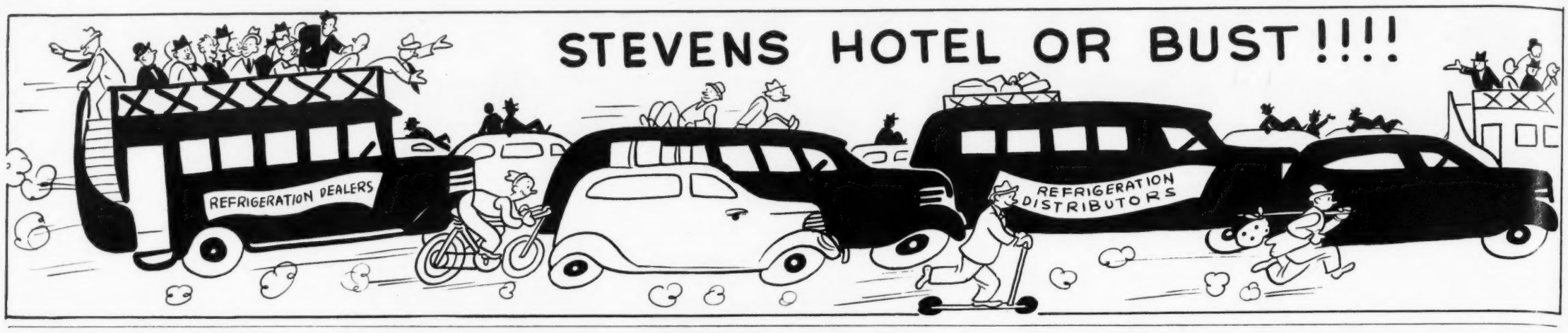
Mr. Holcombe, proprietor of Victor Sales & Supply Co., Philadelphia refrigeration parts and supply jobing firm, stands on the customer's side of the counter in his own establishment. That's Harold Jones (left) and Jimmy Dewey looking business-like behind the counter. Note the effectiveness with which all available display space is utilized.

ATLANTIC
WASHINGTON
KEY WEST
CUBA
WEST INDIES
COLOMBIA
BRAZIL
PORT GUINEA
SPAIN
PORTUGAL
MOROCCO
ALGERIA
FRENCH WEST AFRICA
The sun never sets on BRUNNER
Throughout the world, Brunner Commercial Refrigeration and Air Conditioning equipment is proving its ability to deliver dependable, economical performance in every type of installation. Learn the reason for Brunner's world-wide acceptance. Write for complete details or catalog, today. Brunner Manufacturing Company, Utica, N. Y., U. S. A.
BRUNNER Refrigeration "On Guard" in MEXICO!
with BRUNNER in Norway
75 TONS OF BRUNNER REFRIGERATION
COMMERCIAL BRUNNER REFRIGERATION

● The above advertisement, incorporating reproductions of three earlier advertisements, bears witness to Brunner's thorough and continuing efforts to impress its message on a wide and interested market. More than likely YOUR best prospects today are Brunner-minded. Obviously, it's to your advantage TO KNOW ALL ABOUT Brunner Commercial Refrigeration and its profitable dealer franchise.

COMMERCIAL BRUNNER REFRIGERATION

See BRUNNER at Booths 339-340 at the All Industry Refrigeration and Air Conditioning Exhibition, Stevens Hotel, Chicago, January 13-16.



Locker Plant Offers Diversified Service

JACKSON, Miss. — Brackett's Frozen Food Lockers of this city is endeavoring to make a year-around business of packing, refrigerating, and storing foods, reports J. Brackett, proprietor.

The company opened early in 1940 with 500 steel lockers, of which about 350 are now rented.

One of the specialties of the plant is pecan shelling and storing. Facilities are offered for salt curing and refrigeration of pork. Bulk of this business comes in the fall. Handling and storage of beef and produce is pretty well distributed throughout the year.

A bid for vegetable and fruit business will be made, to tide over the slackness of spring and summer. In addition, the company operates a retail meat store.

Frosted Drinks Planned For Tuthill Exhibit

CHICAGO—Premier 1941 showing of Tuthill Pump Co.'s complete new line, including new 2½ and 5-gallon counter freezers and auxiliary hardening, dispensing, and mix-storage cabinets, in addition to the 1-gallon automatic Freezette, will feature the company's display at the All-Industry Show in January, reports H. T. Kessler, vice president of the refrigeration products division.

Plans for the show include actual production of new frosted drinks, as well as frosted malteds and other favorites, Mr. Kessler says—with generous free "samples."

Norge Dealer Buys Building

NEW ORLEANS—Modern Appliance Co., Norge dealership, has purchased a new building on Carondelet Ave.

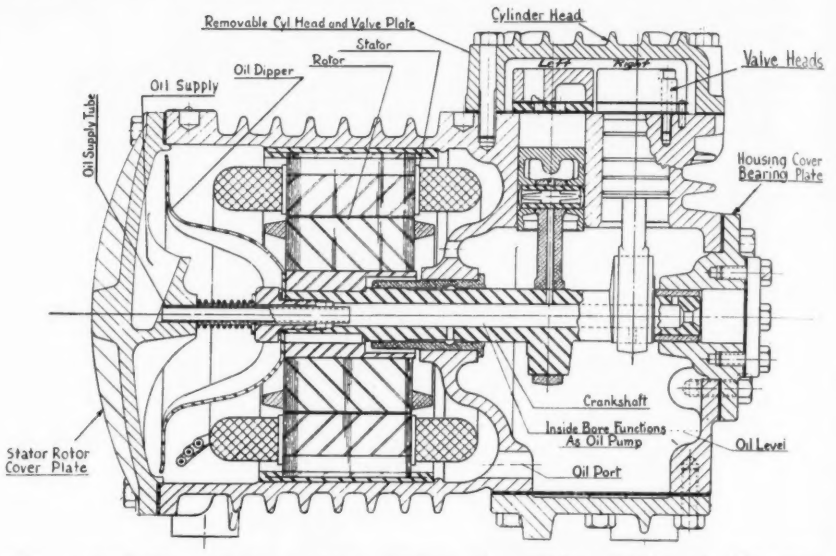
Refrigerator Sales Gain 150% for Ga. Power

ATLANTA—Gains of about 150% in refrigerator sales, 70% in range sales, and 40% in water heater sales for the first nine months of this year compared with the first nine months of 1939 have been chalked up by Georgia Power Co.

Actual comparative unit sales figures for the two nine-months periods are tabulated below, both for the three appliances mentioned and for others in the major appliance class.

Appliance	9 Months 1940	9 Months 1939
Refrigerators	7,463	3,054
Ranges	3,405	2,003
Water Heaters	1,873	1,428
Washers	1,033	721
Ironers	117	105
Vacuum Cleaners	571	407
Dishwashers	10	8

Copeland Designs New Hermetic Unit That Can Be Serviced in the Field



The schematic drawing above shows the major parts of the new Copelametic compressor.

* * *

(Concluded from Page 1, Column 1)

commercial, or high back pressure for each motor size.

Refrigerant used is "Freon-12" exclusively.

In appearance the compressor itself resembles the conventional reciprocating type unit. Cylinders, suction and discharge valves, service shut-off valves, gauge connections, oil check opening, etc. are all in the same relative locations as on an open unit. This was done to further facilitate servicing, and to make it unnecessary for the service man to learn anything new about the Copelametic unit.

Compressor and motor housing are cast in one piece from close-grained semi-steel, so that perfect alignment is said to be assured for bearings and cylinders. Large fins are cast around both motor housing and compressor walls to increase the rate of heat dissipation.

The compressor has bronze-bushed bearings, bronze eccentric rods which are rifle-drilled to the wrist pin, semi-steel pistons with oil grooves, and a Mehanite eccentric shaft. Every part is said to be machined to extremely close tolerances.

A feature given prominence in the Copelametic specifications is the oiling system which provides forced-feed lubrication to all bearing surfaces without the use of an oil pump. A two-blade oil propeller secured to the eccentric and rotor shaft dips into the oil and lifts it up, and fills a reservoir above the shaft center line. From this constant supply, oil is drawn by centrifugal force into openings to three bearings along the hollow eccentric shaft. Wrist pins (the floating type) are oiled through the rifling in the bronze connecting rod.

There is no agitation of oil whatever in the compressor crankcase, it is claimed, as the propeller is located at the opposite end of the compressor-motor assembly. Also, there is said to be no rapid movement of oil across the motor stator, and no flow of refrigerant through the winding, as the compressor is of the valve-in-head design.

Copelametic units are at present built with motors for only 110 volt, 60 cycle, single phase current. Motors may be capacitor start and induction or capacitor run, or else split phase as used on household units. Both motor stator and rotor are replaceable in the field, the latter being keyed to the eccentric shaft.

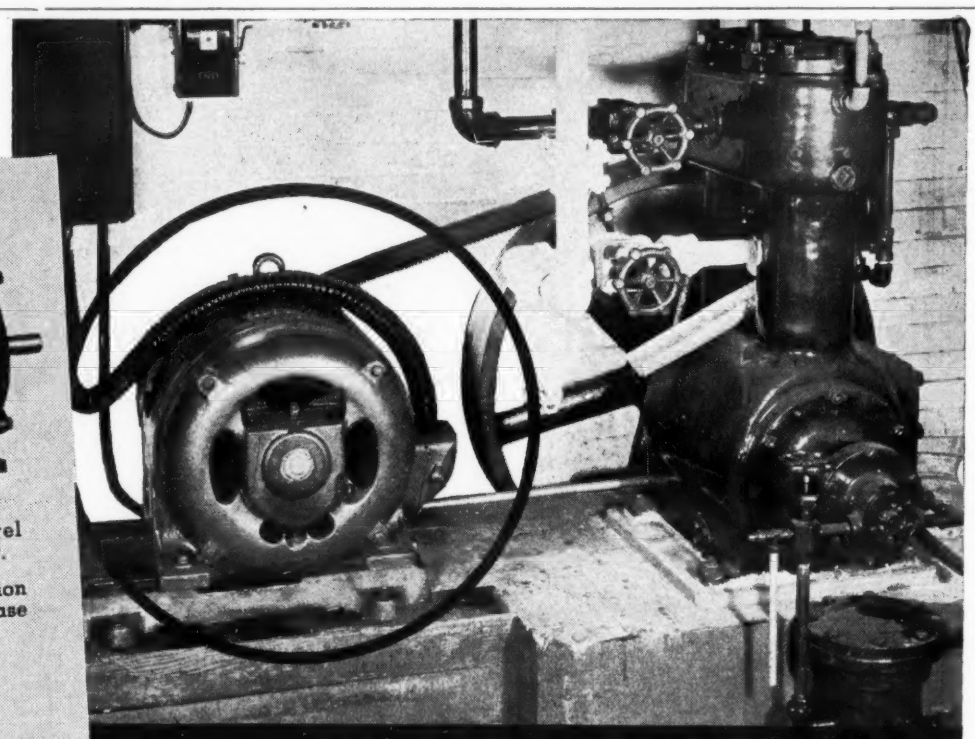
A new condenser is employed on the Copelametic units. It is of counter-flow design with flattened tubes and baffled fins. Cooling is accomplished by a separate motor fan which also delivers air over the compressor-motor assembly.

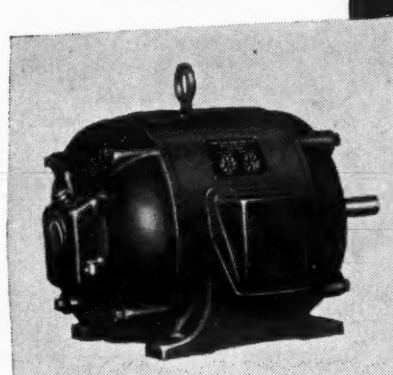
Standard unit receiver is of the hydrogen-welded steel type with an integral fuseable safety plug.

Compressor-motor assembly is spring mounted on the unit's base.

Additional claims made for the Copelametic units are greater economy in operation and smoother, more quiet performance. The units are designed for use on any kind of application now served by open units.

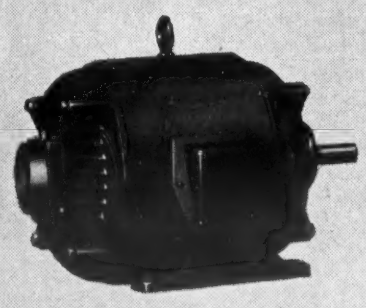
At Right — Century 25 horsepower Squirrel Cage High Torque Motor driving a compressor.





Above — Century Squirrel Cage Three Phase Motor.

Below — Century Repulsion Start Induction Single Phase Motor.



Here Are Two Motors That Have Made Good *in the operation of* Air Conditioning and Refrigeration Equipment!

Century Type SCH High Torque Three Phase Motors have won wide acceptance in the industry because of their unusual quietness of operation. They are quiet in starting, accelerating and running; they are unusually free from vibration. In addition, Century Type SCH Motors have the necessary high torque to start and bring the modern compressor up to full speed without overmotoring the running load — an important advantage.

Century Type RS Single Phase Motors are also engineered and designed to meet the load requirements of the modern compressor. They also provide the advantages of high starting torque and low starting current. They have been operating refrigeration compressors successfully since the first small refrigerators were built. Low starting current means least light flicker and voltage drop, factors that assure improved performance in any installation.

Century Motors are available in types and sizes from fractional to 600 horsepower. The Century Motor Specialist in your locality will place all the facts at your service. We suggest that you call him in.

CENTURY ELECTRIC COMPANY

1806 Pine Street St. Louis, Missouri

Offices and Stock Points in Principal Cities

Century MOTORS

One of the Largest Exclusive Motor Manufacturers in the World

MILLER TAKES THE GUESSWORK OUT OF DOOR GASKET REPLACEMENTS

• You save time and money when you install Miller replacement door gaskets because every one is an exact "twin" of the original. Result—a perfect fit that insures maximum efficiency plus a gasket which offers the best in age and grease-resisting rubber compounds.

If you take pride in both the quality and completeness of your refrigeration service, you will want to feature the use of Miller replacement door gaskets. Choice of 34 gasket types enables you to service 80% of all boxes now in use. Write today for free sample card and name of your nearest Miller jobber.

MILLER RUBBER COMPANY, INC., AKRON, OHIO

Miller "Engineers in Rubber"

Who's Who Where

Promoted By M-H

L. J. KRAUSE

* * *

Krause Directs Central District Refrigeration Sales For M-H

MINNEAPOLIS—L. J. Krause, formerly associated with the Kansas City office of Minneapolis-Honeywell Regulator Co., has been placed in charge of the company's refrigeration activities in the central district.

Mr. Krause's new territory includes Michigan, Ohio, Indiana, and western Pennsylvania, as well as parts of West Virginia and Kentucky. He will devote his entire time to refrigeration work.

Morgan Joins Worthington Office In Kansas City

HARRISON, N. J.—Earl G. Morgan, active in air conditioning and refrigeration since 1914, has joined the air conditioning and refrigeration division of Worthington Pump & Machinery Corp. His headquarters are at the corporation's Kansas City, Mo. office.

Mr. Morgan has served as sales manager of the refrigeration department of the United Iron Works Co., Springfield, Mo.; was once connected with the Frick Co. at Dallas, Tex.; and for nine years was district representative of Vilter at Kansas City.

Ex-Frigidaire Man Named Eureka Representative

ST. LOUIS—Franklin E. Howell, formerly with Frigidaire, has been appointed wholesale representative of Eureka Vacuum Cleaner Co. in the St. Louis region. He will be associated with W. H. Bryan, recently appointed manager for the St. Louis region.

Bagley To Represent Marlo In Central States

ST. LOUIS — William J. Bagley has joined the sales staff of Marlo Coil Co. as a representative in the eastern Missouri, southern Illinois, and Tennessee territory. He formerly was associated with Superior Valve & Fittings Co. in this area.

McNeese Joins G-E Supply

DALLAS, Tex.—E. V. McNeese has been appointed city salesman for General Electric Supply Co. here.

Hamilton Appliance Co. Opens In Baltimore

BALTIMORE — The Hamilton Appliance Co., Inc., has opened a refrigeration, major appliance, and radio dealership at 5411 Harford Ave.

Kramer To Kitchens

DALLAS, Tex. — Albert Kramer, veteran appliances salesman, is manager of the new electric kitchen department installed in the Bebb Francis furniture store.

Hall Will Be G-E Radio Specialist In West

LOS ANGELES—T. F. Hall, for the past year a member of the merchandising services staff of the General Electric radio and television department, Bridgeport, Conn., has been appointed field specialist in radio and television receivers and tubes for G-E with headquarters in Los Angeles. His territory will include the entire state of California.

H. S. Boyle Joins Burkay As Vice President

TOLEDO—H. S. Boyle, formerly with Servel, has been named vice president in charge of sales and advertising of Burkay Co. Walter G. Groth, vice president, continues as sales manager of the eastern division.

Philco Air Conditioning Supervisor

Arthur C. Nodine, formerly sales manager for Philco refrigerators and air conditioners in the northeastern states, has been appointed national supervisor of Philco-York air conditioning. Mr. Nodine has been with Philco for the past 14 years.

Koscianski Opens Store

BUFFALO — John G. Koscianski has organized the Master Appliance Co. with headquarters at 1748 Clinton St. here.

Buffalo Gets New Shop

BUFFALO — Leonard's Refrigeration Service has been opened at 286 Carolina St. here by Joseph Benintende.

12 New Dealers Named To Handle Servel Commercial Line

EVANSVILLE, Ind.—Appointment of a number of new outlets for commercial refrigeration equipment has been made recently by the electric refrigeration and air conditioning division of Servel, Inc. The new dealers appointed by Servel include:

Hodges Refrigeration Co., Muskogee, Okla.; American Store Fixture Exchange, Hammond, Ind.; Bennett Refrigeration Co., Des Moines, Iowa; Handy Refrigeration Service, Galesburg, Ill.; Midwest Fixture Co., Omaha, Neb.; Motor Refrigerator Sales, Jefferson City, Mo.; L. F. Murphy, Kansas City, Mo.; W. C. Stoner, Centralia, Ill.; Jersey Tire Co., Perth Amboy, N. J.; Tangerine Radio & Refrigeration Co., Greenville, S. C.; Ohio Refrigeration Co., Steubenville, Ohio; and Superior Refrigeration Service, Detroit.

NO ONE concerned with refrigeration or air conditioning can afford not to see first hand the progress in these divisions of industry that will be dramatically displayed at the Third All Industry Exhibition in Chicago, January 13th to 16th.

By all means plan to be on hand with an open mind in order to chart your course for 1941 with a full knowledge of all its vast possibilities.

Detroit Lubricator Company will have a display in booths 62 and 63 that you should not miss.

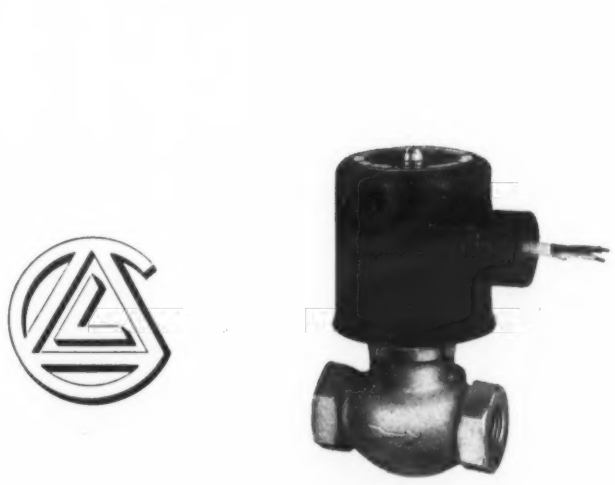
* * *

DETROIT LUBRICATOR COMPANY

General Offices: DETROIT, MICHIGAN

Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, Montreal, Toronto, Winnipeg

Export Representatives: Melchair, Armstrong, Dessau Co., Ridgefield, New Jersey



AIR CONDITIONING & REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office; Established 1926 and registered as Electric Refrigeration News

F. M. COCKRELL, *Founder*

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NOVEMBER 27, 1940

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'41 All-Industry Exhibition To Be 'Tops' - - Come!

ANYONE who has attended one or both of the first two All-Industry Refrigeration & Air Conditioning Exhibitions knows that it's the event of the year for everyone in the business.

The things you see, the things you hear, the people you meet, the fun you have—it all adds up to a great week for the common people, if we may borrow a phrase from the politicians.

Results from the first two All-Industry Exhibitions so far exceeded expectations that manufacturers are preparing their exhibits this year with unusual care. Merely displaying the products they have to sell is not nearly enough, they have learned. Their exhibits must also be *educational.*

You Can Learn Things By Studying the Exhibits

Last year the exhibits which drew the biggest crowds were the ones which provided action for the visitors, which showed them *how* and *why* products were made in a particular way, which taught them how these products could best be applied, which demonstrated their proper use.

These were the exhibits which caused talk out in the field for weeks and months afterward. And this "talk," relayed back to headquarters by field men, has resulted in the unprecedented care, thought, and attention which are being expended on the creation of the exhibits planned for the 1941 Exhibition.

Why Visit Broadway? See Mel Knight's Show

Mel Knight, the indefatigable man of ideas, and his hardworking committee, are also cooking up entertainment for the visitors which, as you can see from some of the advance notices in this issue, will furnish you with the equivalent of a New Year's holiday on Broadway. Work and play are to be balanced. The whole program is an embodiment of the theory of life which has been so prevalent in this industry down through the years—the "work hard, play hard, go home happy" theory.

No matter how much you learn from the exhibits and the experts stationed at these exhibits, however, and no matter how much fun you have at the entertainments, your biggest dividend from attendance at the exhibition will likely come from your conversations with your fellow-workers in the business.

Share Your Problems With Men In Same Line of Business

If you are the proprietor of commercial refrigeration merchandising establishment in Elliopolis, Ohio, trying to break into air conditioning on the side, you'll run into Bill Twill, who has the same sort of operation in Peolis, Ill., and Sam Flam, who has sold display cases and store coolers to half of St. Louis.

If you are running a busy independent service firm in Nebraska City, you'll meet Joe Blo, who is doing the same thing in Bumphis, and any number of other good guys who have the same problems, the same trials, tribulations, and triumphs as you do.

It will be a revelation.

Here Is an Antidote For Executive Loneliness

Ever stop to think how lonely the proprietor of a business gets? Nobody to talk to, who really understands his problems. Sheet metal workers have their unions, farmers have their granges, dentists and doctors have their societies (and so do engineers), and bankers have their clubs.

But where can a commercial refrigeration dealer go to talk about the things that interest him most? There are luncheon clubs, to be sure. Much of the tremendous popularity of Rotary, Kiwanis, Lions, and similar clubs is due to a desire to alleviate this specific form of loneliness to which we have just referred.

Difficult To Find Men With Exactly Same Problems

But although the men Mr. Commercial Dealer meets here do have things in common with him, they still can't talk commercial refrigeration.

Well, this All-Industry Exhibition is just what the doctor offered for the lonely commercial refrigeration dealer, and the service man. "Misery loves company," and such an assemblage always feels better after airing mutual troubles and discovering that a lot of other fellows have exactly the same problems.

How To Eat Your Cake And Have It, Too

When they get to crying about these problems, though, one thing leads to another, and pretty soon one man's method for getting out of difficulties is traded for the other's solution to another common problem. Such trades aren't "deals"—they just "come natural."

As some sage once put it:

"If I trade you a dollar bill for your product, you have my dollar bill and I have your product. That's even Steven.

"But if I trade you my idea for your idea, you have my idea, I have yours, and yet we still have our original ideas. So we're both ahead."

Who Sponsors the Exhibition And Why—and How

The 1941 Refrigeration & Air Conditioning All-Industry Exhibition is sponsored by the Refrigeration Equipment Manufacturers Association (Rema), the membership of which includes the leading companies making complete equipment, component parts, and supplies.

This group has a keen interest in the success of all other branches of the industry. The products of Rema members are absorbed into the production of *new* equipment, also in the repair and replacement of *old* installations.

Since the prosperity of the manufacturers of parts and supplies is dependent upon the activity of all other groups (including producers and distributors, dealers, jobbers, and service men) it is logical that the Rema organization should take the lead in promoting an enterprise for the advancement of the industry as a whole.

F. M. Cockrell Was First To Propose the Exhibition

It is well worth recording that F. M. Cockrell, founder of AIR CONDITIONING & REFRIGERATION NEWS, first had the idea of an all-industry exposition. He proposed it many times before the idea took root, and even then it had its beginnings in a small way.

Back in the autumn of 1935 the Refrigeration Service Engineers Society, a young and struggling organization of independent service men, had scheduled a meeting in Detroit. Parts manufacturers were invited to exhibit their wares. A few exhibit spaces were sold.

Parts Manufacturers Form Association

Around the same time some of the parts manufacturers were discussing a plan to form an association. Leaders in the rising new business of parts jobbing were also feeling the need of an organization. Initial meetings of both groups—meetings which led to the organization of Rema and of the N.R.S.J.A.—were held in the offices of AIR CONDITIONING & REFRIGERATION NEWS.

These gatherings gave the needed impetus to the Service Society's exhibit. All three groups went away with visions of bigger and better gatherings.

Early History of the All-Industry Conclave

In the fall of 1936 the R.S.E.S. sponsored another show at Memphis. The Refrigeration Supplies & Parts Manufacturers Association (now the Refrigeration Equipment Manufacturers Association) and the Refrigeration Supply Jobbers Association arranged their meetings concurrently with this show. Exhibits increased in number.

All three groups joined forces again in 1937 in Chicago. By this time the show was beginning to take on substantial proportions. The manufacturers, however, were figuring the cost in relation to the attendance.

Possibilities of Expansion Begin To Appear

They were also seeing the possibilities of expanding the scope of affairs and staging the show on a much larger scale.

Early in 1938, these manufacturers started making plans for the First All-Industry Exhibition. The R.S.E.S. was urged to forego its own plans for a show in Buffalo. They could not be persuaded.

First Exhibition in 1939 Had Surprising Results

Their Buffalo show was a relatively small one, however, and the big show went on in Chicago as per schedule in January, 1939. Since this gee-hawing, a compromise plan has been worked out with the R.S.E.S., and the society of service men now cooperates wholeheartedly with Rema in the staging of the annual All-Industry Exhibition.

Success of the First All-Industry Exhibition was tremendous, and eliminated all doubt regarding the future direction of the movement. Elaborate exhibits filled the hall. Attendance was double that of the most optimistic estimates. Meetings were well attended, and constructive proposals were endorsed.

Second Exhibition in 1940 Was Bigger & Better

With a registered attendance of 7,542, and with many exhibitors taking home briefcases full of orders, the Second All-Industry Exhibition closed its four-day run in Chicago last January with even greater acclaim.

Despite the worst cold spell that the Middle West had suffered in many years, and icy roads that probably kept home many would-be drivers to the Exhibition, the registered attendance showed a 25% gain over registered attendance during the 1939 show.

Plans For 1941 Show Reveal Creative Ideas

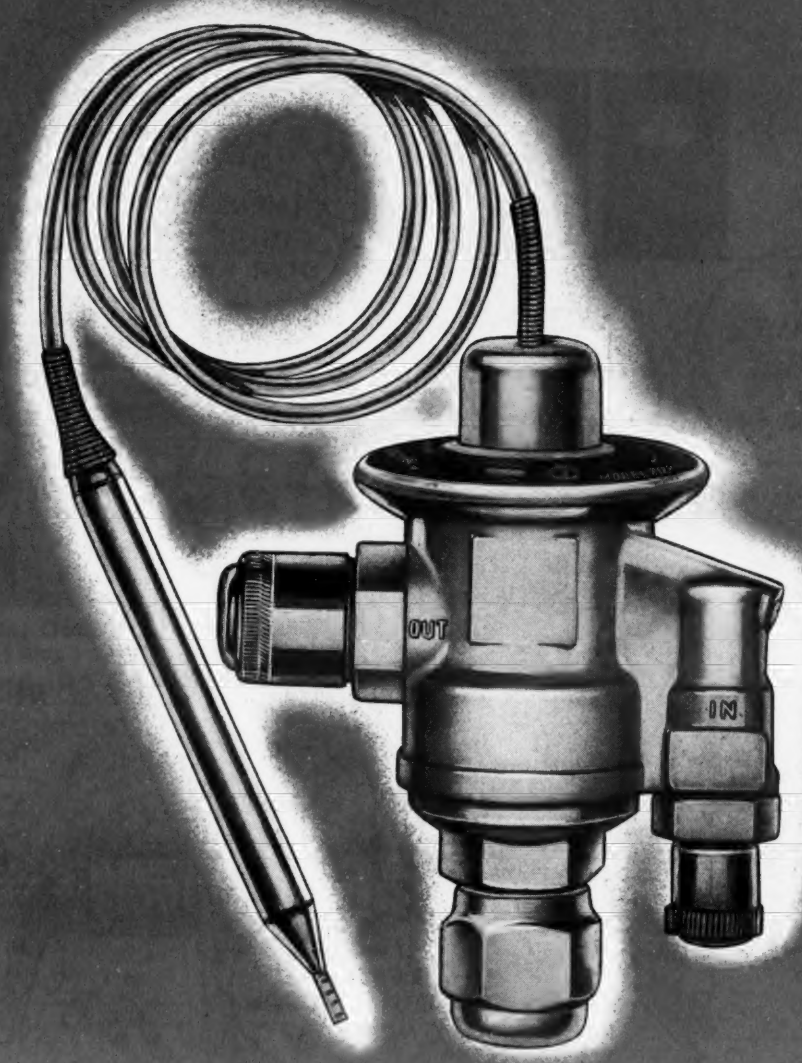
As noted before, the improvement in the exhibits themselves was commented upon by all comers. And this year not only has the quantity of exhibits increased, but as pointed out earlier, much work is being done toward making them more educational.

Every indicator points toward a Third All-Industry Exhibition next January which will be as big an improvement over the Second as the Second was over the first.

Nobody in the industry should miss it.

They'll Do It Every Time . . . By Jimmy Hatlo

WHEN THEY GO THROUGH YOUR POCKETS THEY DON'T MISS A THING—
HMMH! MATCH-BOOK FROM THE CLUB WHOOPEE. I SHALL CERTAINLY LOOK INTO THIS.
THE LOOT
JIMMY HATLO
11-1
Copr 1940 King Features Syndicate Inc World rights reserved
BUT JUST ASK THEM TO SEND A SUIT TO THE CLEANER'S— THEY'LL DO IT EVERY TIME.
CLEANING AND PRESSING
THANX TO DICK PARKER, BRIDGEPORT, CONN.



DEPENDABLE

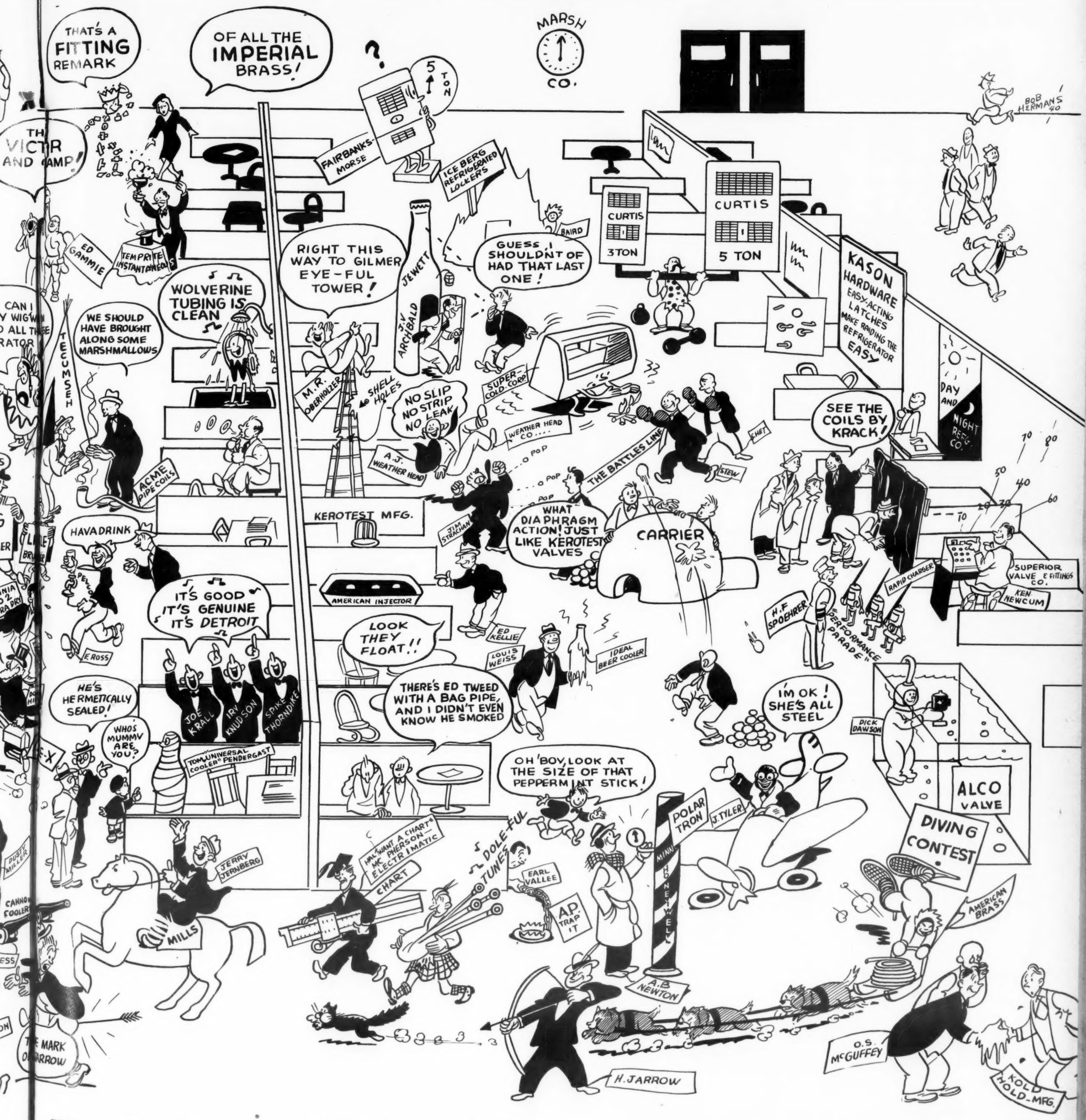
AUTOMATIC PRODUCTS COMPANY – 2450 NORTH THIRTY-SECOND STREET – MILWAUKEE, WISCONSIN

Attend THIRD ALL INDUSTRY REFRIGERATION *and* AIR CONDITIONING EXHIBITION • JANUARY 13–16 • STEVENS HOTEL ap BOOTH 128–129

If at first you don't succeed
In doping this all out,
Please bear with us while we plead
That artists rules must flout.

So this cartoon is but a joke—
With trademarks come to life,
Bizarre doings, enchanted folk,
And peas upon the knife.

TO THE SHOW



We gave our artist trademarks 'n' stuff
And typical industry ads;
He mixed these with a bunch of guff
And ribbed some topnotch lads.

Don't let this nightmare fool you
With things that aren't done—
The News and Rema join you
In having a little fun.

New Developments Bringing Greater Use of Milk Cooling Equipment

Single-Can Cooler Designed For Farm With 10-Cow Herd

WASHINGTON, D. C.—A one-can immersion milk cooler especially designed to fill the needs of the small dairyman will soon be available through the cooperation of a number of manufacturers with Rural Electrification Administration, according to an REA announcement.

Almost half the electrified dairy farms in the country, according to census reports, milk herds averaging 10 cows or less. To meet new city milk regulations, these farms have heretofore had to purchase expensive equipment, too large for the actual needs, REA asserts.

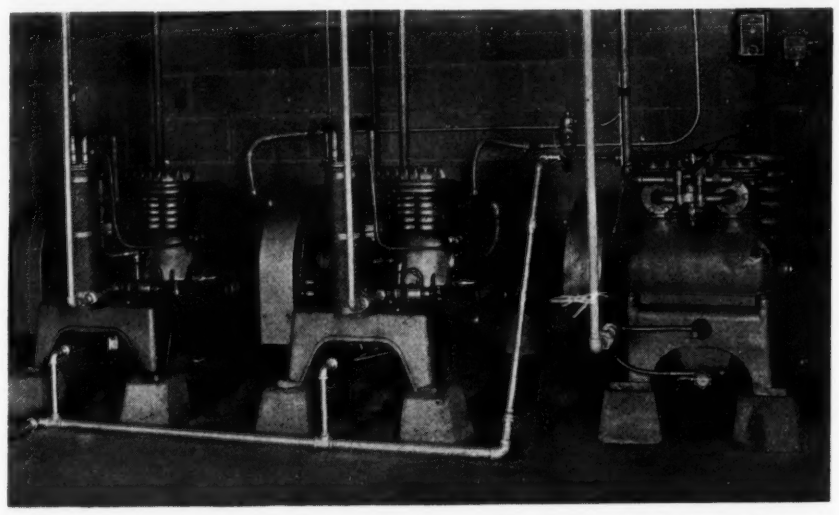
The new one-can coolers, developed to meet this situation, will sell at from $75 to $90, as compared with an average cost for two-can coolers of around $200, it is claimed. Embodying the results of several years' experience and research, the one-can coolers, although much less expensive, are claimed to operate as good as the larger coolers.

While most dairy farmers who ship only cream can utilize a household refrigerator or a deep well for storage purposes, city milk shippers are required to meet much stiffer requirements, it is pointed out. Nearly all city milk regulations require cooling of milk to 50° F. within an hour after milking, and an increasing number bar milk from the market if the dairyman has not installed an approved type cooler.

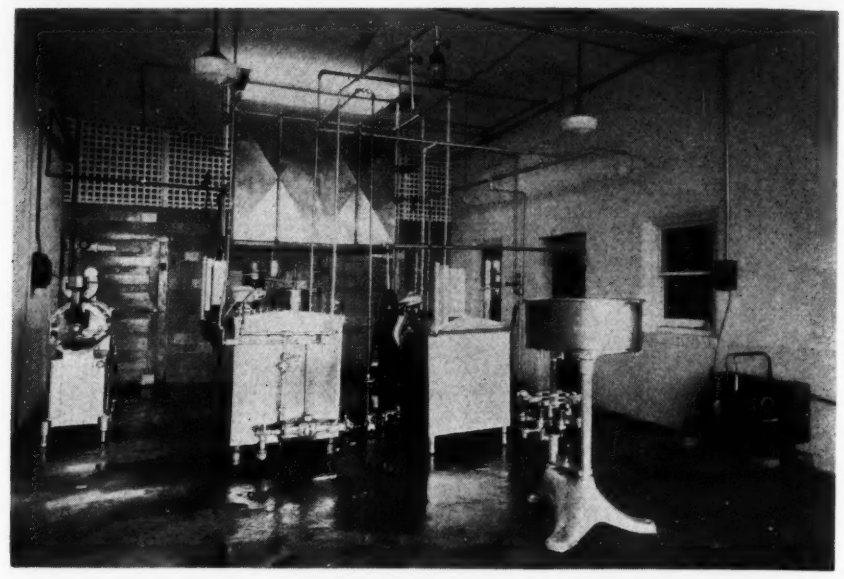
This has placed the small dairyman at an increasing disadvantage, and forced him to put in some kind of cooling equipment. Using ice, it was pointed out, his initial cost was low, but the purchase and hauling of an average of 50 lbs. of ice daily runs up the operating cost. Immersion coolers of the mechanical refrigeration type have offered low operating cost and increased convenience, but the first cost for necessarily oversize equipment has been so high that many small producers could not meet it.

With a low-cost, one-can cooler available, producers with herds of 10 cows, or even five and as few as two cows, shipping 10 gallons a day or less, can profitably install a cooler and increase their milk check.

What Can Be Done With Small Commercial Units In Dairy Plant Work



Three of the low-pressure condensing units installed in the Clearfield Dairy, Silvis, Ill. The two units at the left (note oil separators) are 5-hp. models used to freeze ice cream. The one at the right furnishes refrigeration for a milk aerator.



Aerating room of the Clearfield Dairy, a model for dairies of any size. Refrigeration unit which supplies cooling for aerating also pulls the milk room and the anteroom—when the aerating is not in process.

* * *

Model Country Dairy Plant Shows How Low Pressure Units Can Be Used Best

SILVIS, Ill.—Two Model F17WL Mills 5-hp. "Freon" compressors, one Model MD2AL Mills ¾-hp. methyl compressor, one Model MA1A5 Mills ¼-hp. methyl compressor, one Model M4X Tyler all-porcelain delicatessen case with compressor counter, one Model LT 280 Marlo low temperature blower coil, and one Model 95 Marlo unit cooler—that's a summary of the refrigeration equipment which C. L. Hartman of Rock Island, Ill. supplied for the Clearfield Dairy when it moved into its new location here.

This dairy, owned by O. Van Heck and his two sons, was formerly operated at the Van Heck farm about two miles north of Silvis. After purchasing the building which they now occupy here, the Van Hecks called in Mr. Hartman—who had been handling their refrigeration work while they were on the farm—to figure on the refrigeration equipment for the new plant.

HARDENING ROOM

The two 5-hp. compressors are hooked up in such a way that either one of them will pull the hardening room. When the valve on the freezer (which is a Cherry-Burrell 40-quart, direct expansion unit) is opened, both compressors start to freeze the ice cream. When the valve on the freezer is closed, one of the machines shuts off and the other continues to run on the hardening room until the proper temperature is reached.

Both of the Mills 5-hp. units are equipped with Riley oil separators, and the heads and crankcases are hooked together so as to keep a constant oil level in both compressors. There is a check valve and a large hand valve located on the 1⅜-inch line to the hardening box coil. Suction line to the freezer is 1⅝ inch; liquid line is ¾ inch.

The Marlo low-temperature coil is of the twin-fan electrical defrost type, making it easy to defrost without a noticeable rise in room temperature.

In addition to the equipment supplied by Mr. Hartman, the dairy also uses a 3-ton Lipman machine which was brought in from the farm. This unit pulls the aerator, the milk room, and the anteroom. The milk room is equipped with a twin-fan Model 348 Marlo coil, the anteroom with a Model 95 Marlo coil. These are so hooked up that when the aerator is in operation no refrigerant goes into either the milk room or the anteroom.

The ¾-hp. Mills unit handles two Bastian-Blessing cabinets, one a dipping cabinet and the other a combination dipping and brick cabinet.

The different temperatures are controlled by constant pressure valves in the suction line.

The ¼-hp. Mills compressor, which is located under the compressor counter of the Tyler case, provides the refrigeration for this Model M4X three-shelf delicatessen unit.

54° WATER SUPPLY

The water which the dairy uses is supplied from a well outside the building, and runs at a temperature of 54° F. even in the hottest weather. It is pumped into a 300-gallon storage tank by a Westco Injector pump.

The dairy's hardening room was figured for 450 gallons of ice cream a day, but with plenty of capacity for increased business.

The low-temperature coil in the hardening room is mounted on a stand made of 1½-inch galvanized iron pipe and placed before the concrete was poured in the floor.

Both freezer and hardening room coils have Alco expansion valves and heat exchangers which boost their capacity.

BE SURE TO SEE SUPERIOR at the THIRD All-Industry Exposition

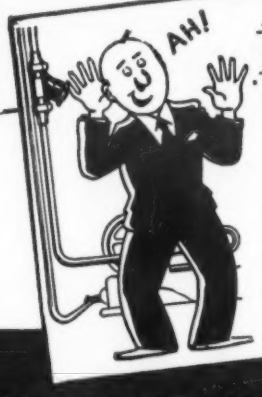
BOOTH 124

Superior will present another unique animated display which will be interesting as well as educational. Don't miss it!

By Their Yellow Tag Shall Ye Know Them!
SUPERIOR "Soft Seat" DIAPHRAGM PACKLESS VALVES
Yep! They really have soft seats—no kiddin'! So easy are they to close that a child could do the job; yet the seats are tough and long-lasting.

Superior Quick-Couplers
—are exactly what the name implies—handy little swivel couplers for "quick-coupling" charging lines, gauge lines, etc. to flare fittings—without the use of wrenches.
A soft composition gasket in the swivel connection does the trick. Run 'em up "finger-tight," and they're "gas-tight." Gasket easily and inexpensively replaced.

"YES SIR . . . IT'S A SUPERIOR ECONOMIZER"!
It will increase the overall capacity, and reduce the running time of your commercial job AS MUCH AS 20%.
ECONOMIZERS prevent sweating and frosting of suction lines—save compressor repairs caused by oil slugging—provide for active use of 100% of evaporator surface—and bring "on-the-line" jobs within the normal cycle range.
A profit-sharing investment for the merchant—a money-maker for refrigeration men!



NO HUM-M-M-M! NO CHATTER! NO SQUEE-E-K!
. . . We've designed the chatter out of SUPERIOR check valves . . . you can definitely bank on that!
. . . Opens and closes tightly below six ounces pressure . . . Minimum of pressure drop . . . All internal parts removable for soldering lines to valves, or for future inspection of parts, without removing valve from line.
TRULY—A SUPERIOR CHECK VALVE

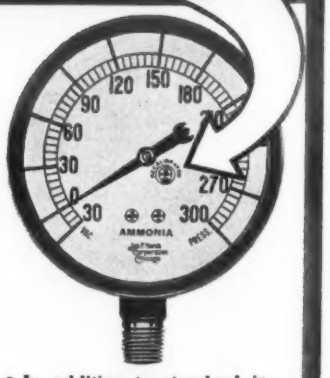
SUPERIOR VALVE & FITTINGS CO.
1509 WEST LIBERTY AVENUE ★ PITTSBURGH, PA.
EXPORT DEPARTMENT ★ 100 VARICK STREET ★ NEW YORK, N. Y. ★ CABLES—"ARLAB", NEW YORK

That "RECALIBRATOR" SCREW
—a SMALL thing to look for . . . a BIG thing to find

THE "Recalibrator" screw on a Marsh Gauge identifies the kind of gauge that you can *keep* accurate. If it's knocked out of adjustment, just turn that screw until the pointer (with pressure or vacuum removed) rests at zero. The gauge will then be correct at all points on the scale—a *basic* correction that can not be made by ordinary "zero adjustments" or by the usual re-setting of the pointer.

This same "Recalibrator" is found in Marsh Dial Thermometers . . . just one of a long list of betterments that are combined only in Marsh Instruments.

JAS. P. MARSH CORPORATION
2067 Southport Ave., Chicago, Ill.



● In addition to standard instruments Marsh offers the "Serviceman", remote reading thermometer and group of handy small portable recorders—temperature recorders, pressure recorders and operating cycle recorders . . . sold at a remarkably moderate price. You will see these and other interesting instruments at the Marsh booth during the 1941 Refrigeration & Air Conditioning Exhibition.

MARSH Refrigeration Instruments

'Coolest' Man In the Plainview Flying Club

During business hours, T. C. Meinecke is a hard-working refrigerator dealer operating stores in Plainview and Lubbock, Tex. After hours, he's an aviation hobbyist and a member of the Plainview Flying Club.

* * *

'Mug O' Dough' Campaign Ups Knoxville Sales

KNOXVILLE, Tenn. — A 36% increase in October sales of electric refrigerators, ranges, stokers, and water heaters was reported by the nine dealers who participated in the "Mug O' Dough" competition in cooperation with the City Power Board.

Sales by the nine dealerships during the month totaled 261 units, as compared with 191 in October of last year, and included 110 refrigerators, 92 ranges, 26 water heaters, and 33 stokers.

Participating dealers included S. H. George & Sons department store, Woodruff's, Sterchi Bros., Knox Dry Goods department store, Sears, Roebuck & Co., Woods-Taylor-Cox Co., Electric Home Servants Co., Fowler Bros. Co., and Lester Maxwell Furniture Co. The City Power Board does not merchandise appliances.

1,200 Sales, 32 'Specials' Is Dept. Store's Record

NEW ORLEANS—The major appliance department of the Maison-Blanche department store here set a new record for itself this year by selling 1,200 new Frigidaire refrigerators in the first nine months. This figure represents a gain of 420 units—or 60 refrigerators per salesman—over the 1939 total of 780.

Surprising part of this new sales figure is that only 32 of these 1,200 refrigerators were the low-priced "special" model.

This improvement in the department's sales is attributed by Manager J. H. Eberhardt to a revised selling policy. The store devotes 10,000 sq. ft. of floor space to Frigidaire refrigerators, radios, and washing machines. A record amount of newspaper advertising was used by the department this year.

Dealers' Digest—

Lappin Buys Building

MILWAUKEE — Lappin Electric Co., electrical appliance firm which three years ago leased and occupied the three-story brick building at 1022 N. First St., has purchased the property, reports David C. Lappin, president.

New Gulfport Showroom

GULFPORT, Miss. — Coast Hardware Co., Norge dealership headed by C. K. Anderson, has built a new showroom for refrigerators and appliances in a new $10,000 building.

Coast Dealer Remodels

SAN RAFAEL, Calif.—The Westinghouse Store here has completely remodeled its store in conjunction with the firm's expanded appliance sales program. Harold Snyder is the proprietor.

New Products, New Men

EAST LIVERPOOL, Ohio—Reed Bros. furniture store has expanded its appliance department to include G-E and Gibson refrigerators, G-E laundry equipment, and RCA radios. The company also had added a full-time salesman to follow-up leads.

New Westinghouse Dealer

WARRENTON, Va.—Risdon Hardware Co. has been named Westinghouse dealer here.

Texas Dealer Had Plane Before There Was A Landing Field

Meinecke Bros.
"More Than Just a Hardware Store"
Stores at Lubbock and Plainview
Wholesale and Retail
Plainview, Tex.

Dear Mr. Knowlton:

I am in receipt of your letter which refers to the Chrysler "Photo-Gram" magazine with the article about Plainview, Tex., and her aviation operations.

Please pardon the delayed action on my part in replying to your letter. This is a very busy season of the year in our business, and besides that we have been holding a cooking school and I have personally been holding a baby girl that was born since I received your letter.

The article in the Chrysler "Photo-Gram" gives you a fair story of the operations of the Plainview Flying Club, Inc. I have been flying since 1935 and have owned a couple of ships personally, before the Plainview Club was formed. I carry a private pilot's license No. 36036 and have found aviation the most interesting of any sport or subject that I have ever participated in.

With myself, flying is a hobby. I use it some in connection with my business as we sell electric refrigerators and Electrolux gas refrigerators; all kinds of ranges and heating systems and butane plants and butane appliances.

We (Meinecke Bros.) have stores both at Plainview and Lubbock. At the time the writer moved to Plainview in 1937 there was not even a designated landing field. Since that time we have formed the Plainview Flying Club. We have been successful in getting the city and county to purchase a 320 acre airport, and they have recently jointly agreed to erect a 60-ft. by 80-ft. hangar. We have also been successful in getting our local college, (Wayland College) included in the CPT (Civilian Pilot Training) school.

I am inclosing a couple of the shots as per your request, one of which was used in the Chrysler "Photo-Gram."

Very truly yours,
T. C. MEINECKE

Crosley Distributing Corp. Names Officers

CINCINNATI—Directors of Crosley Distributing Corp., subsidiary of Crosley and distributor of the company's products in Cincinnati, Chicago, New York City, Dayton, and Columbus, Ohio, have elected the following officers:

Lewis M. Crosley, president; R. C. Cosgrove, vice president and general manager; R. I. Petrie, vice president and general sales manager; George E. Smith, vice president and secretary-treasurer; and John J. Hope, Jr., assistant treasurer.

Guy Flaig is manager of Crosley Distributing Corp.'s Cincinnati branch; C. S. Tay, of the Chicago branch; Fielding Robinson, of the New York City branch; and C. V. Dilard, of the Dayton and Columbus branches.

Slogan Contest Features New Store Opening

FORT WAYNE, Ind.—A slogan contest with a 6-foot refrigerator as first prize featured the opening of the new business location of Rainbow Radio Appliances at 1315 Maumee Ave. here. O. O. Pense is manager of the company.

Distributor-Dealer Doings

Morley Bros. Opens New Detroit Showrooms

DETROIT—Formal opening of the new showrooms of Morley Bros., distributor in this territory for Stewart-Warner products and Duo-Therm oil-burning space heaters, was held for three days last week.

Factory representatives joined with employes of the distributorship in showing the new lines of merchandise to appliance dealers, department store executives, etc.

Buys Partner's Interest

STEVENS POINT, Wis.—Franklin Miller has purchased the interest of A. W. Schein in the Miller-Schein Co., local electrical and gas appliances, refrigeration, heating, and air conditioning dealership.

Fred Kern New Head Of Helburn Co.

MONTGOMERY, Ala.—Fred Kern has succeeded the late Samuel Helburn as president of the Helburn Co., distributor of Frigidaire refrigerators and appliances, Warren commercial refrigerators, and Larkin coils in the Alabama territory.

Miss. Dealer Will Equip Army Purchasing Office

MAGEE, Miss.—Hartze Appliance Co., General Electric dealer, has been awarded a contract for domestic refrigeration and air conditioning for a new purchasing office building to be erected by the U. S. Army purchasing corps near Camp Shelby at Hattiesburg, Miss.

New Hampshire Dealer On Governor's Council

NEWPORT, N. H. — Harold G. Fairbanks, head of a local refrigerator sales and service firm, was named to the Governor's Executive Council in the recent election.

As the Republican candidate, he defeated his Democratic opponent, John W. Stanley, in the fifth district.

Bartholemew Is Celotex Manager In Cleveland

CLEVELAND — Lee Bartholemew, formerly general sales manager of Celotex, Ltd., London, England, is manager of The Celotex Corp. here.

Arkansas Dealer Moves

ARKADELPHIA, Ark. — Caldwell Electric Co., Frigidaire dealer here, has moved into a new, modern building.

Ice trays by Inland are the first choice for original factory equipment by leading makers of automatic refrigerators—and for replacement sales by dealers, because they are the last word in fast-freezing, quick-releasing ice cube convenience.

These two Inland Magic Finish Ice Trays make old style trays as unnecessary as weak, watery ice cubes. In a flash, these modern ice trays by Inland give you a few cubes at a time or a brimming bowlful . . . instantly, full-sized and unshattered.

For superswift, maximum convenience, it is the Shucker Tray all the way. And for the quick-release feature, at minimum cost, it is the Tilt Out Tray on every count. In short, for maximum convenience—for minimum cost—it's ice trays by Inland, the choice of refrigerator makers, jobbers and dealers. For details, prices and discounts, write to

INLAND MANUFACTURING *DIVISION*
GENERAL MOTORS CORPORATION
DAYTON, OHIO *CLARK, NEW JERSEY*

...At Your Beck and Call

THE MAN YOU NEED!

Call on U.E.I. for TRAINED MEN—installation and service men to this industry. U.E.I. graduates are trained as you want them trained for all positions requiring technical knowledge or mechanical ability. Our Free Employment Service is nationwide, personal, prompt. Try it.

UTILITIES ENGINEERING INSTITUTE
Belden & Wayne Aves. *Est. 1927* Chicago, Illinois

UNIVERSAL COOLER DETROIT
The Seal of Quality Since 1922

COMING

Equipment for a Re-building Plant

In an early issue AIR CONDITIONING & REFRIGERATION NEWS will begin publishing a series of articles on special equipment used in a plant that specializes in re-building household refrigerator units.

These articles will describe equipment that any service engineer can make in his shop, including such items as a control tester, motor capacity checker, and refrigerant reclaiming hookup.

Motor Concern Declares Quarterly Dividend

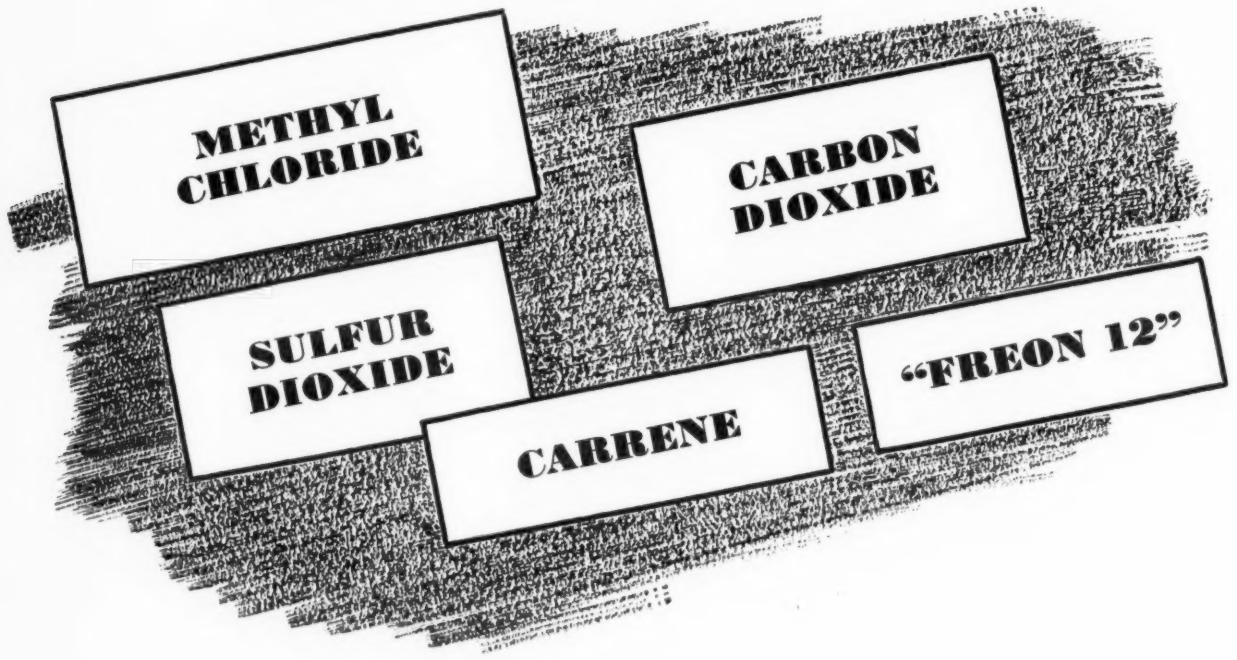
WAUKESHA, Wis. — Waukesha Motor Co., whose products include air conditioning units, has declared the regular quarterly dividend of 25 cents, payable Oct. 1 to stockholders of record Sept. 14.

S-W Pays Dividend

CHICAGO—Directors of Stewart-Warner Corp. have voted a dividend of 25 cents per share payable Dec. 1 to stockholders of record at the close of business Nov. 8. This is the second dividend declaration made by Stewart-Warner directors during the current fiscal year.

WATCH THE *new* IDEAL "*Frost Draw*" DRAUGHT BEER COOLER
steal the show at the
ALL INDUSTRY EXHIBITION
Chicago . . . January 13—16, 1941
THE IDEAL BEER COOLER COMPANY . . . 2953 EASTON AVE. . . . ST. LOUIS, MO.

The Lubricant to use with



OIL SELECTION MADE EASY
Handy guide for jobbers and service men lists 87 refrigeration and air conditioning units, their refrigerant and the correct lubricant to use with each. New edition just off the press . . . yours for the asking.

REGARDLESS of the make of your equipment, you are assured of clean, highly efficient operation when you use a lubricant that does not react with any of the new type refrigerants.

Thousands of units using these refrigerants are kept at peak by the use of *Texaco Capella Oils*.

Highly resistant to sludge formation, *Texaco Capella Oils* help to keep piston rings free, valves clean and shutting tight. New low pour-points insure greater evaporator efficiency.

Texaco Capella Oils are so thoroughly dehydrated that they readily pass 25,000-volt dielectric strength tests. They come to you in refinery-sealed containers.

Trained lubrication engineers will gladly cooperate in making savings with *Texaco Capella Oils* in your refrigerating units. Phone the nearest of more than 2300 Texaco warehousing points in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York, N. Y.

TEXACO

TEXACO DEALERS INVITE YOU TO ENJOY

FRED ALLEN in a full-hour program every Wednesday night. CBS, 9:00 E.S.T., 8:00 C.S.T., 10:00 M.S.T., 9:00 P.S.T.

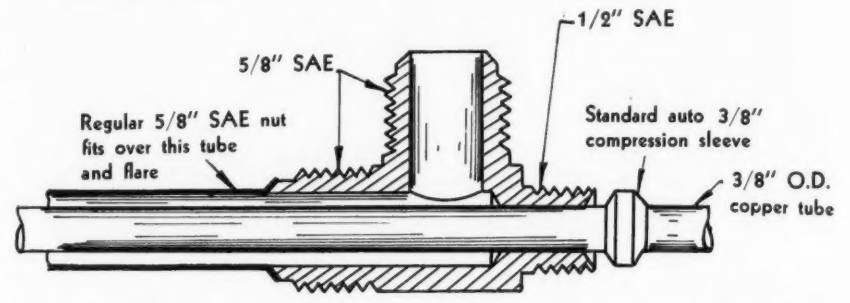
METROPOLITAN OPERA every Saturday afternoon, NBC. See local newspaper for time and station.

TEXACO Capella Oils

E. S. Wright
A.S.R.E., R.S.E.S.

Service Forum

This is one in a series of articles aimed to give the refrigeration service engineer some useful suggestions and descriptions of various service methods that can be used both in the shop and in the field.



Take a standard ⅝ x ⅝ x ½ SAE and invert flare with drill after cutting face of flare flat with file; other sizes can also be made. Regular ½-inch flare nut must be shortened so as to draw up tight on compression sleeve. This can be used to make up heat exchangers, condensers, water coolers, and other items.

* * *

How To Make Simple Heat Exchanger Tee

A simple heat exchanger tee can be made by following the instructions shown in the accompanying drawing. A ⅝ and ⅜ inch combination or ½ and ¼ inch combination can be used by taking a ⅝ by ⅝ by ½ inch tee or a ½ by ½ by ⅜ inch tee, filing or grinding the flare flat and then using a drill to make an inverted flare in the end of the tee which was filed flat.

The regular flare nut will have to be cut down in most instances, as otherwise there will be too much tread to allow the nut to tighten snug on the collar sleeve.

For a temporary job regular graphite twine packing can be used but a permanent tight job is obtained through the use of compression sleeves which are available at any automobile supply house and are used on gas and oil lines. These sleeves cannot be used over again and usually must be cut off the tube with a hacksaw as they bite into the tube when compressed. They are inexpensive items.

It is best to use the ⅜ by ⅝ inch heat exchanger on ½ by ¼ inch suction and liquid line work as no restriction of suction line is caused. The use of a reducing union at each end of the ⅜ inch heat exchanger line will allow it to be attached to the ¼ inch liquid line carrying refrigeration.

In rolling up the tubing after having made a heat interchanger by inserting one tube within the other, we do not roll it too small. Twenty-four to 30 inches in diameter is about right and allows it to be easily unrolled for use.

FREE SEND FOR THIS AMAZING BOOK
Mr. Dealer: Every day, more and more people are buying humidifiers. Write today for full information about the HUMIDOME, America's finest portable electric humidifier. *Low priced.*
THE HARRY ALTER CO.
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REFRIGERATION WRENCHES

Light, strong, well-balanced alloy steel wrenches that simplify close-quarters work. Durable, chrome-plate finish. Write for literature. Sold singly and in Sets by mill supply and refrigeration jobbers.

J. H. WILLIAMS & CO.
225 Lafayette St., New York, N. Y.

WILLIAMS
SUPERIOR DROP-FORGED TOOLS

Refrigeration Finds Many Uses in Army Canal Zone Airfield

(Concluded from Page 1, Column 5)

two clothing storages, a photograph paper storage vault, and several film vaults.

In the depot supply building at Albrook field, refrigeration is supplied for two clothing storage rooms by means of a duct system of supply and return air, with cooling supplied by two unit coolers located outside the rooms. The coolers consist of floor-mounted units, with extended fin and tube cooling elements.

Refrigeration is supplied by Baker dual "Freon" units, connected in parallel and arranged to give eight steps of control, as specified by the War Department. Automatic control is provided by two thermostats for each room, one for high temperature and the other for low temperature, with a thermostat transfer switch.

The low temperature, 10° F., is operated within the room for a period of five days each month, and a temperature of 35° F. is maintained during the rest of the month.

Also in the supply building is a photograph paper storage room, in which a temperature of 50° is maintained by means of a ceiling-type forced convection cooling unit, equipped with multiple positive blowers. Temperature is controlled by means of a thermostat and solenoid liquid valve.

Several film vault rooms also are cooled by a propeller-type forced convection unit, controlled by a remote thermostat and liquid solenoid valve.

Refrigeration for the film vault and photograph paper storage is provided by Baker "Freon" machines, connected in parallel and operated by a pressure switch with sequence setting.

Air conditioning is provided for both floors of the equipment repair building, which is used primarily for the repair and maintenance of instruments, bomb sights, parachute drying well, and armament repairs. Conditioned air is circulated through a duct system, with temperatures divided into six zones by means of a thermostat which operates six mixing dampers located in the equipment room.

Cooling is accomplished by means of an extended fin and tube direct expansion cooling coil, served by Baker "Freon" machines automatically controlled by a gradual acting duct-type thermostat installed in the refrigerated section.

Engine test building is equipped with special engine mounts, vertical wind tunnels, and devices of special War Department design for the testing of engines, both of the air-cooled and Prestone-cooled type.

Cooling water is supplied to an extended fin and tube water-cooling coil, through which the air passes to the carburetors of the engines under test. Refrigerating equipment consists of Baker "Freon" units, connected to banks of evaporators arranged with special liquid distributing devices and suction headers to cool the water.

Another Reason For Seeing the Show

This is the "major usherette" who will be the leader of a team of attractive and attractively costumed usherettes that will direct traffic to the exhibit spaces in the Stevens hotel during the Third All-Industry Refrigeration & Air Conditioning Exhibition. So if you want to know where to go (at the Exhibition) see this young lady or one of her team.

* * *

(Concluded from Page 1, Column 3)

reality enjoys a vacation that is also time spent in helping him to do a better and more profitable job.

Success of the "First All-Industry Exhibition" in 1939 dispelled any doubts about the future course of the show. Elaborate exhibits filled the Stevens hotel exhibition hall, and attendance was nearly double that of optimistic advance estimates.

The Second All-Industry Refrigeration and Air Conditioning Exhibition in January, 1940, was much greater than the first. The Refrigeration Service Engineers Society and the Refrigeration Supply Jobbers Association again met at the Stevens during the show, and the American Society of Refrigerating Engineers and the National Air Conditioning Association also met in Chicago during the Exhibition Week.

Convening of the A.S.R.E. in Chicago for its national convention marked the first time in a number of years that the engineering society had pulled away from New York City for its annual conclave, and marked a strengthening of the ties between the engineers and the group sponsoring the exhibition that will see further cooperative movements in future years.

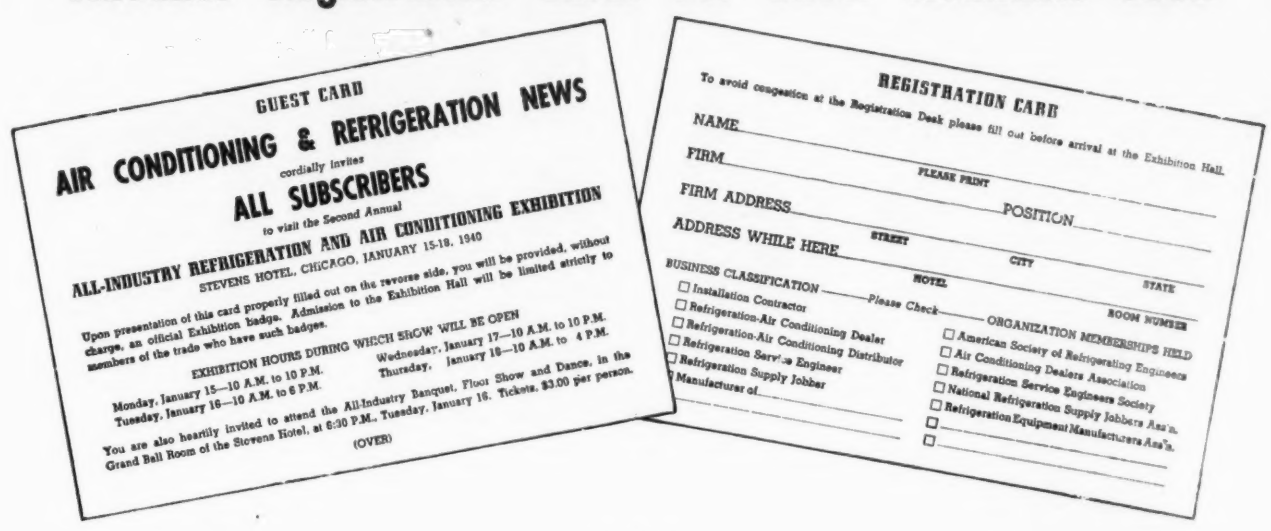
Last year's "All-Industry Banquet" was a complete sellout, a standing-room-only affair, and was featured by a floor show that couldn't be duplicated in the best night clubs in America. At the conclusion of the show the audience stood and paid a deafening tribute to M. W. "Mel" Knight of Peerless of America, Inc., chairman of the exhibition, for the fine job he had done.

For the "Third All-Industry Banquet," Mr. Knight promises a greater show, including several "surprises."

Last but not least, the All-Industry Exhibition is a promoter of good fellowship in an industry. When you meet personally the fellow with whom you do business, the chances are that you can learn something, and that you will understand each other's problems better.

And too, after the day's events are over, the hotel where an exhibition is being held is a great place to relax and have some fun.

Advance Registration Cards For Show Available Soon



GUEST CARD

AIR CONDITIONING & REFRIGERATION NEWS

cordially invites

ALL SUBSCRIBERS

to visit the Second Annual

ALL-INDUSTRY REFRIGERATION AND AIR CONDITIONING EXHIBITION

STEVENS HOTEL, CHICAGO, JANUARY 15-18, 1940

Upon presentation of this card properly filled out on the reverse side, you will be provided, without charge, an official Exhibition badge. Admission to the Exhibition Hall will be limited strictly to members of the trade who have such badges.

EXHIBITION HOURS DURING WHICH SHOW WILL BE OPEN

Monday, January 15—10 A.M. to 10 P.M. Wednesday, January 17—10 A.M. to 10 P.M.
Tuesday, January 16—10 A.M. to 6 P.M. Thursday, January 18—10 A.M. to 4 P.M.

You are also heartily invited to attend the All-Industry Banquet, Floor Show and Dance, in the Grand Ball Room of the Stevens Hotel, at 6:30 P.M., Tuesday, January 16. Tickets, $3.00 per person.

(OVER)

REGISTRATION CARD

To avoid congestion at the Registration Desk please fill out before arrival at the Exhibition Hall.

NAME _____ PLEASE PRINT

FIRM _____ POSITION _____

FIRM ADDRESS _____ STREET _____ CITY _____ STATE _____

ADDRESS WHILE HERE _____ HOTEL _____ ROOM NUMBER _____

BUSINESS CLASSIFICATION — Please Check — ORGANIZATION MEMBERSHIPS HELD

- ☐ Installation Contractor
- ☐ Refrigeration-Air Conditioning Dealer
- ☐ Refrigeration-Air Conditioning Distributor
- ☐ Refrigeration Serv'ce Engineer
- ☐ Refrigeration Supply Jobber
- ☐ Manufacturer of _____

- ☐ American Society of Refrigerating Engineers
- ☐ Air Conditioning Dealers Association
- ☐ Refrigeration Service Engineers Society
- ☐ National Refrigeration Supply Jobbers Ass'n.
- ☐ Refrigeration Equipment Manufacturers Ass'n.
- ☐ _____
- ☐ _____

* * *

CHICAGO—Admission to the Third All-Industry Refrigeration & Air Conditioning Exhibition Jan. 13-16 in Chicago will be by badge only, but every effort is being made to make the registration process as simple as possible for those who plan to attend, reports Barrett Scudder of Jas. P. Marsh Corp., chairman of the committee in charge of registration.

In fact, anyone connected with the industry who is planning to attend can register in advance. This is made possible by a guest card with which is consolidated a registration card which can be filled out before an individual starts out for the Exhibition. (See cut of guest card which was used last year.)

These cards will soon be available through all exhibitors at the Exhibition, and readers of the NEWS can also receive these cards by writing to the NEWS, if they wish.

The registration booth for the Third All-Industry Exhibition will be located at the main entrance of the lobby floor of the Stevens hotel (Michigan Ave. entrance) at the foot of the stairs which is the entrance to the mezzanine floor displays, and which is also immediately adjacent to the two East entrances to the stairs leading to the Stevens exhibition hall.

Directly across from the registration booth at the foot of the stairs leading to the mezzanine will be the "major usherette" for the show, on whom a spotlight will play.

The "major usherette" will direct those coming to the exhibits for the first time, advising them where to register and giving other information.

This "major usherette" will have charge of eight other usherettes who will be stationed at all stairs leading down to the exhibits in the exhibition hall and to the exhibits on the mezzanine floor. These girls will advise all attending to register at the main entrance, and will advise the guests that there are exhibits on both the lower and mezzanine floors.

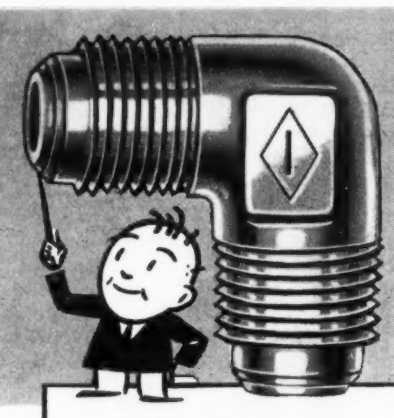
In registering the guests at the Exhibition will be asked to give their name, address, company affiliation if any, and the branch of the industry in which they are engaged.

Other members of the committee in charge of registration are J. W. Hatch of Bush Mfg. Co.; and S. R. Robinson, Bonney Forge & Tool Works.

When you write your statement for the

IMPERIAL "Triple Seal" CONTEST

don't forget—"it's in the groove"



SERVICE MEN all over the country are asking their Jobbers for entry blanks so they can write on "Why I Prefer Imperial Triple Seal Fittings" for the big Imperial Triple Seal Fitting Contest.

If you haven't entered yet be sure and do so because there are prizes for everybody—no blanks. And it's easy to write about Imperial Triple Seal Fittings because this is the fitting that has the groove in the seat. Just a seemingly small improvement and yet one that has caused service men everywhere to use these fittings.

But you write your own statement—how these fittings will pull up into a leak proof joint even when the seat has been nicked or marred—how they can be reconnected time after time without the slightest trace of leakage—or any other of the many reasons why you prefer and use Imperial Triple Seal Flare Fittings. If you haven't used these fittings yet be sure to try them out so you can still get under the wire.

IMPERIAL BRASS MFG. CO.
565 S. Racine Ave., Chicago, Ill.

Here are the rules for IMPERIAL'S BIG TRIPLE SEAL FITTING CONTEST

1. Write a letter giving the reasons why you prefer and have used Imperial Triple Seal Fittings.
2. Pick out a system which you installed or serviced using Imperial Triple Seal Fittings and be sure to give the following information. (a) Date of installation or service. (b) Location. (c) Type and size of unit. (d) Number of fittings used. (e) Name of Jobber from whom fittings were purchased.
3. Draw up a diagramatic sketch of the system showing the tubing layout and the location of Triple Seal Fittings and any other Imperial accessories that went into the job.
4. Include a photograph of the system if you have one or can readily get it. (This is not a requirement of the contest).

YOUR JOBBER HAS ENTRY BLANKS
All letters, sketches, etc. should be mailed to Imperial at Chicago.
The contest will close Dec. 15, 1940.

PRIZES

First Prize	$100.00
Second Prize	50.00
Third Prize	25.00
Fourth Prize	15.00
Fifth Prize	10.00
Sixth Prize	5.00
Seventh Prize	5.00
Eighth Prize	5.00
Ninth Prize	5.00
Tenth Prize	5.00

And Prizes for Every Entrant in the Contest (note the rules).

In the event of ties for any of the prizes, duplicate prizes will be awarded.

IMPERIAL Refrigeration and Air Conditioning Products

● You are cordially invited to visit us at Booths 66-67-68 at the 3rd All-Industry Exhibition January 13th to 16th, Hotel Stevens, Chicago

No producer of an industrial product has ever been more exacting than Ansul is in the production of Ansul refrigerants. Ansul gases are checked and rechecked to be clean, pure, dry.

And no distributive organization, we sincerely believe, has ever been more exacting in *customer service* than are members of the Ansul jobber organization. Friendly, sincere, anxious to serve you better, the Ansul Jobber near you will welcome your request to let him deliver the proof.

ANSUL

SULPHUR DIOXIDE
ICE-X
METHYL CHLORIDE

AGENTS FOR KINETIC'S "FREON-12"

AC-33

THIRD ANNUAL ALL-INDUSTRY REFRIGERATION AND AIR-CONDITIONING EXHIBITION

Ansul Will Welcome You at BOOTHS 77-78

STEVENS HOTEL, CHICAGO, JANUARY 13-16

ANSUL CHEMICAL COMPANY
MARINETTE • WISCONSIN

Maintenance Firm's Growth Attributed to Efficient Handling of Service Calls

Operation of Chicago Service Company Traced Through Various Sections

By Robert M. Price

CHICAGO—The refrigeration service customer is wide awake these days. He demands fast, efficient service—and gets it. And because a steady growth of business is a close partner of customer satisfaction, the service company must be equipped to give "the best possible service at the most reasonable cost," in the opinion of A. G. Weil, manager of Refrigeration Maintenance Corp. here.

"Refrigeration service has evolved into a settled, legitimate type of business," says Mr. Weil. "The customer is aware of this change, and the service company today must have an organization that can offer the best possible materials, machines, and manpower. We attribute our steady growth to keeping pace with the changes in the service business, and making a conscientious effort to do every job to the complete satisfaction of the customer."

Matching strides with the rapid advance of the service business is no cinch job, Mr. Weil testifies. Ten years ago, in 1930, Mr. Weil and Mr. T. J. Reedy organized Refrigeration Maintenance Corp. It was strictly a "two-man" organization. These two men were "the works," handling all phases of the business themselves.

In 10 years the firm has developed into one of the largest organizations of its kind. In 1935, a second company, North Town Refrigeration Corp., was organized, and now operates as a separate concern, handling Frigidaire sales and service on Chicago's North Side. This year, Refrigeration Maintenance Corp. of Michigan was established in Detroit to handle general service and authorized Universal Cooler service in that area.

The large modern plant at 321-27 East Grand Ave. in Chicago represents the "big business" proportions to which this service company has grown. A total of 16,200 square feet on three floors is utilized by this organization. The entire second floor of 5,400 square feet is devoted exclusively to shop operations. The entire first floor, with the same floor area, accommodates the general offices, service offices, and stockroom. The 5,400 square feet of the concrete floored, well lighted basement is used for heavy equipment storage as well as for certain of the operating equipment for the shop; such as converters, air compressors, vacuum pumps, etc., lines from which are run to the shop. An elevator serves all floors.

Windows on all sides of the building provide a maximum of light and air, a feature especially appreciated by the shop. All equipment has been laid out with a view to the most practical and economical method of procedure. Each shop man concentrates on but one type of work, consequently providing the utmost in efficiency.

CONCENTRATED SERVICE

Thus, certain men work only on compressor rebuilding, others only on motors, some rebuild only one type of hermetic unit, still others work only on painting, and so on through all the shop operations. This specialization gives a maximum control, efficiency, and lowest cost. The shop foreman brings to his job a thorough practical knowledge of field service as well as ability.

The modern shop has many pieces of special machinery which have been built to meet the specific needs of this business. Without this equipment it would not be possible to render the fullest, most satisfactory service, as the variety of present day refrigeration and air conditioning equipment covers a wide field.

Some of the special and standard equipment in use consists of lathes, screw machine, vacuum pumps, discharge pumps, electrical testing panels, volumetric and electric test domes, running in racks, dehydrating oven and carriages, spray booth and equipment, paint stripping assemblies, automatic lapping wheels, grinders, control testing apparatus, pressure coil cleaning equipment, float calibrating mechanisms, test cabinets, leak detecting baths, electric arc welding, acetylene welding, converters for D.C. and A.C. current, refrigerant gas exchange assemblies, expansion valve testing equipment, motor testing apparatus, arbor press, drill press, and many special tools and assemblies.

PARTS DEPARTMENT

Repairs and reoperation to any and all types of refrigeration and air conditioning equipment are made in this plant. This covers the field of household, commercial, and air conditioning equipment from the smallest to the largest tonnage.

The parts department and general offices occupy the first floor. Thousands of parts, small and large, are kept on hand at all times. A 40-foot writing shelf is built alongside one wall of the parts department for the use of the service men. They turn in their material requisitions to the parts department to withdraw needed material. All parts are checked in and out of the stockroom and checked against service work orders.

Each unit of the organization, from service call dispatcher to the service man completing the call, is geared for efficiency of operation. Each service call is examined as to the nature of the complaint, routed to the proper man in the proper department. Every completed call is checked for customer's and inspector's okay.

HANDLING CALLS

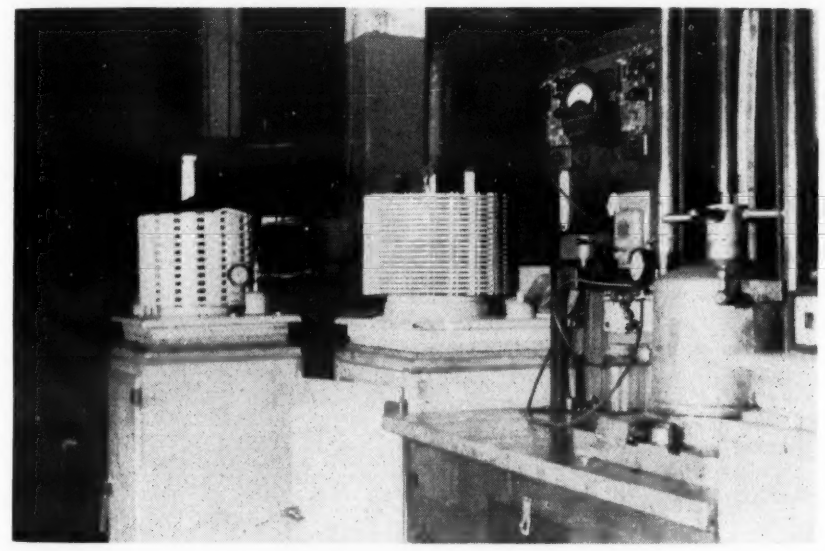
Behind this "completed call' is a network of office routine originating with the answering of an incoming telephone call by the switchboard operator. The call is then transferred to the service department where it is received on two six-line key cases with a total of four positions so that the call can be immediately answered by one of the four men receiving and dispatching calls.

The service call is taken on an individual service call ticket in triplicate. If the equipment is under contract, the dispatcher checks the Kardex files at his elbow to mark the date and call number on the

(Concluded on Page 29, Column 1)

Steps In Rebuilding Hermetic Units

Rebuilding of hermetic units for household refrigerators is one of the services offered by the Refrigeration Maintenance Corp. of Chicago. The operator in the picture above is electric welding one of the hermetic units. After the service work is completed, hermetic refrigerators are tested with volumetric and electrical test equipment, shown in lower photo.



Refrigeration Tubing That Is

DRY — no moisture
SOFT — easy to bend
CLEAN — no dirt or scale
DEPENDABLE — no leaks

SEE YOU AT BOOTH 80
THIRD ALL-INDUSTRY REFRIGERATION EXHIBITION
STEVENS HOTEL — CHICAGO
JAN. 13-16, 1941

WOLVERINE TUBE COMPANY
DETROIT - MICHIGAN

SQUARE D IN REFRIGERATION
DO IT ALL WITH SQUARE D
SWITCH • PROTECT • REGULATE

CLASS 9160 CAPACITY BOOSTER VALVE

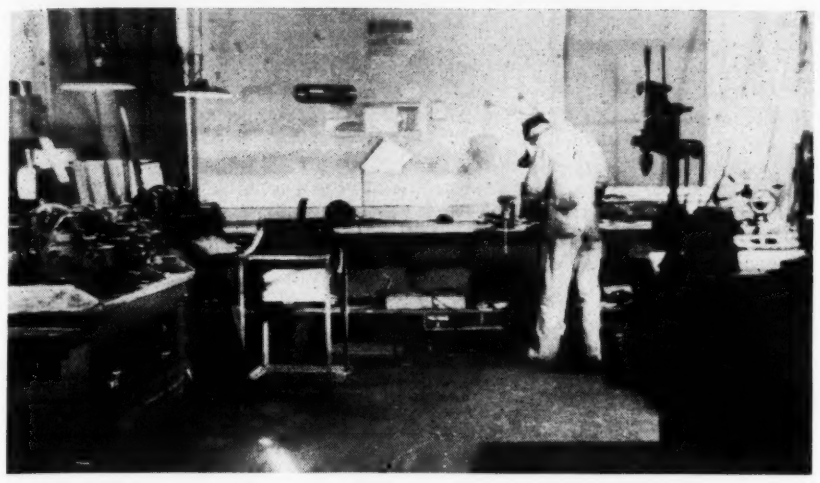
Functions in the exact manner of its pilot—boosting the capacity of that pilot! Shown at left with Square D solenoid valve and thermostatic expansion valve in pilot circuit for air-conditioning.

Jobber Inquiries Invited

SQUARE D COMPANY
REGULATOR DIVISION
DETROIT · · MICHIGAN

Write for Bulletin

Machining Department of Service Shop



The machining department of Refrigeration Maintenance Corp. is shown in the above picture. Much special equipment designed to meet the needs of the refrigeration service firm is used in the shop.

* * *

Method of Directing City-Wide Crew Of Service Men Is Explained

(Concluded from Page 28, Column 5)

contract card for that job, and also checks to make sure that no call has recently been received on this equipment. If such is the case, the dispatcher refers to a file containing copies of all previous work orders filed by street address, and makes a notation on the call ticket to direct the service man's attention to the previous work which was recently performed, so that he can proceed intelligently to eliminate repeated trouble.

CALL TICKETS

After the call ticket has had all pertinent information written on it along with the date and time of receipt of the service complaint, it is stamped with a call number and filed for dispatch in the bin of the service man operating in that territory.

Telephone calls by the service men from their territories are made into the service department on two direct lines. As the men call in, the filed calls in their bin are given to them and the date, time of issue, and the man's name written on all copies.

The triplicate call form is then separated, one copy going into the man's "issued bin" in a folder, a second copy filed on the dispatcher's desk by street address so that the progress of any call received that day can be immediately ascertained, and the third copy put in a folder for the service man's record when he turns in his work orders the next morning.

SERVICE WORK ORDERS

The service work orders are checked carefully when they are turned in, stamped and "okayed" for work done, for time, and for material used. They are then costed and passed to the billing department.

Service Work Orders are made out in quadruplicate. One copy goes to the customer, with a receipt form for C.O.D. work. Another copy goes to the accounting department. A third copy is utilized as a form for an analysis of a particular manufacturer's equipment so that the service company can report to this manufacturer any recurring troubles on equipment.

The last copy, which is cardboard, is put in the permanent street address file. In this file complete information on all service calls and charges on any customer can be "called up" for quick reference. This file is kept active for a year.

The materials requisition form is attached to this work order. This form goes to the stock room where materials to be used on the job are supplied. This stock maintenance and disposition constitutes a special department. When materials are issued to the service man, they are put in his own pick-up bin, where they can be picked up without delay.

A crew of 25 service men, each working in an individual zone, services over all of Chicago and suburbs. Each man is uniformed, bonded, drives his own automobile, and operates on a "travel allowance" for his car. Service men have at least five years' field service experience and the average is eight years, according to Mr. Weil. The service manager is a veteran of 15 years in refrigeration, and the shop foreman, who heads up a crew of 20 shop repair men, is credited with 13 years' experience.

SERVICE MEETINGS

To keep this large staff of outside and shop repair men "up" on new improvements, new products, and newly developed methods of repair and installation, regular service meetings are held at the plant. Main object of these meetings is to impress upon every man that he must be able to do a completely satisfactory job on every outside or shop repair, and to train him along these lines.

All service men report at the plant each morning to turn in their previous day's reports and receive their new calls. They withdraw material needed and leave for their territories. Every few hours throughout the day they report to the service department.

CARRY PARTS SUPPLY

Each service man carries in his car a supply of parts and materials to make any ordinary repair. Additional supplies are delivered to these men in the field in case of an emergency. This system of maintaining a supply of parts and materials in the field at all times greatly speeds up the number of completed calls a service man can make—and reduces the time per call, it is said.

In addition to being routine repair experts, the service men are trained as "salesmen" in the field. They are instructed to be alert to every sales opportunity for repair, new installation, replacement, or reoperation of parts and equipment—but they are cautioned to make no repair or replacement that is not "absolutely necessary" and that will not be to the customer's best interest.

A 30 day guarantee is given on all service labor. A year's guarantee is given on all parts furnished, and on complete reoperations of equipment, a year's guarantee on service labor and parts is given.

The firm's operations are diversified. A large part of the service work is done on a maintenance contract basis. Contracts may be made to cover labor only, or may be a "complete contract." The complete contract includes all mechanical parts, gas, and labor, but does not include cabinet parts and hardware.

In speaking of contract service, Mr. Weil stressed the need for careful inspection and appraisal of equipment before the contract is made. All equipment must be put into working order, in accordance with the inspector's suggestions, before the company will assume responsibility for maintenance. During the contract period, an inspection is made every four months.

In addition to service, maintenance, and installation, the firm does equipment testing work in the field on manufacturers' equipment. A complete engineering service is available to the firm's customers, and this department does installation and layout work, as well as correcting difficulties on equipment already installed. Commercial and air conditioning installation is done for manufacturers, sales agents, dealers.

Another department is given over to the reconditioning of household refrigerators for apartment houses, department stores, and private owners. In the shop are facilities for complete repairs, and complete reconditioning of commercial and air conditioning units.

Coordinating the many units of the service plant—the outside service crew, the dispatchers, inspectors, the stockroom, and shop crew—on a 24 hour schedule, and catching up all the loose ends of employee supervision and office detail so that the customer gets service when and how he wants it—and at a reasonable cost is a big-time job.

G-E Builds New Control For Process Air Conditioning

SCHENECTADY, N. Y. — A new selector control for maintaining constant temperature and humidification and dehumidification control in process air conditioning has been announced by the General Electric Co. It is also suitable for automatic year-around comfort control.

This new selector-control unit, when used with a three-wire, "floating" type thermostat or humidistat, provides close control under widely varying conditions.

HERMAN GOLDBERG CO.

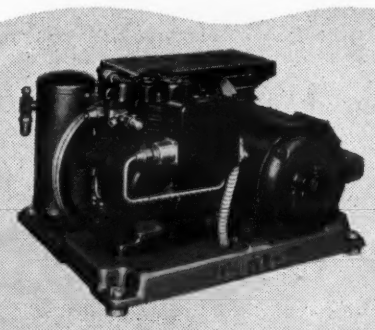
MANUFACTURERS' AGENT

RANCO CONTROLS — ANSUL REFRIGERANTS

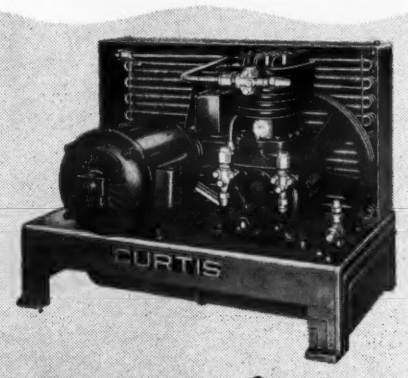
STANDARD EVAPORATORS

D.F.N. DEHYDRATORS CHICAGO SEALS

20 N. WACKER DR. - CHICAGO

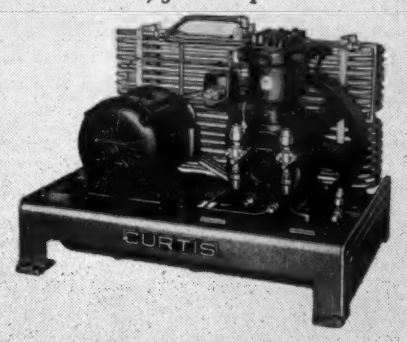


1/6 to 1/2 h.p. Self-Contained Condensing Unit



At left—1½ h.p. Air-Cooled Condensing Unit. Other sizes from ¼ to 5 h.p.

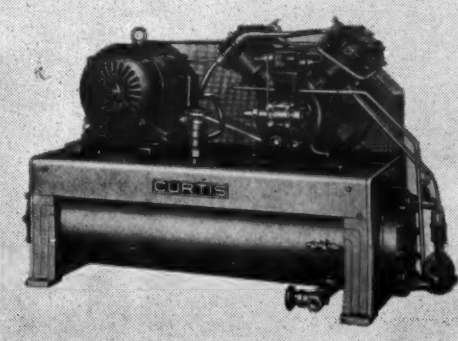
Below — 5 h.p. Water-Cooled (Counterflow) Condensing Unit. Other sizes from ⅓ to 5 h.p.



"Plus-Profits" Value

The Line That Meets All Requirements From 1/6 to 30 H.P.

CURTIS CONDENSING UNITS for Commercial Refrigeration



15 h.p. Cleanable Shell and Tube Condensing Unit. Other sizes from 3 to 30 h.p.

The completeness of the Curtis line is your assurance that you can meet practically every demand of commercial refrigeration with Curtis Condensing Units. There are 45 Curtis air-cooled units from 1/6 to 5 h.p. inclusive, and 47 water-cooled units from 1/3 to 30 h.p. inclusive. All models available for either Freon (F-12) or Methyl Chloride. This means more orders to produce more profits.

Curtis Design Features Include:

- Centro-Ring Positive Pressure Lubrication
- Timken Tapered Roller Bearings (models above ¾ h.p.)
- Removable Cylinder Heads
- Drop forged, alloy steel, heat treated crankshaft and connecting rods
- Balanced sylphon bellows seal
- Unusually large receivers and condensers

In addition to standard type units, there are specially mounted Curtis units for household use, ice cream cabinets, self-contained units for cases, refrigeration in transit, beer pumps.

Long experience, advanced engineering, precision manufacturing methods and the use of only the finest materials insures the exceptionally dependable, trouble-free and economical performance of Curtis units. Behind every Curtis product is Curtis' 86 years of successful manufacturing and engineering experience and the Curtis tradition of fine quality throughout.

Air Conditioning — In addition to a complete line of Condensing Units, Curtis also offers Packaged Air Conditioners in five sizes—3, 5, 7½, 10 and 15 tons capacity.

For full information on how the complete Curtis line leads to bigger sales and profits, write to Curtis today.

CURTIS REFRIGERATING MACHINE COMPANY

Division of Curtis Manufacturing Co.

1912 Kienlen Ave., St. Louis, Mo.

Established 1854

CURTIS REFRIGERATION AIR CONDITIONING AND COMMERCIAL

HELPFUL TECHNICAL SERVICE

PROMPT SHIPMENTS

COAST-TO-COAST STOCK POINTS

NOT LESS THAN 99-5 MIN. PURE

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Question of the Week

Answered By

F. O. JORDAN, Registered Consulting Engineer, State of Michigan

Why Use a Liquid Line Solenoid Valve?

Los Angeles, Calif.

Editor:

I would like to know what is the advantage of installing a solenoid valve in the liquid line to an air conditioning coil and having the room thermostat shut off the valve when the room is cool enough?

I see my manual shows that kind of hook-up. After the solenoid valve is shut off by the thermostat, the compressor runs until it cuts out on low pressure control.

Is this hook-up always used? If so, what is the reason?

V. H. C.

Answer: No, this hook-up is not always used. However, there is an advantage to it, and it is very frequently used. Many refrigeration people would not think of controlling any except the smaller installations in any other way. Others take the opposite view. But don't think it is just a matter of opinion and let it go at that.

If you merely connect the thermostat to the compressor motor starter in the simplest way, so the thermostat stops the compressor when it is "satisfied" merely by opening the electrical circuit to the motor, the refrigerant that happens to be in the air conditioning coil, or "low side," obviously is left there while the system is out of operation.

As soon as the pumping action of the compressor ceases, the continued boiling or evaporation of liquid refrigerant in the low side rapidly raises the refrigerant pressure in the low side until it reaches the pressure corresponding to the temperature of the air surrounding the system. Therefore it is a short time only until the refrigerant and air come to the same temperature, and the low side pressure rises to the pressure corresponding to the saturation temperature of the particular refrigerant.

RISE IN PRESSURE

Suppose we have an air conditioning system using "Freon-12" at the common operating suction or low side pressure of 40 lbs. gauge, with air entering the coil at 80° dry bulb temperature and 50% relative humidity. Now suppose we stop the compressor merely by allowing the thermostat to open the electrical circuit to the compressor motor. In a very short while the refrigerant in the low side will rise to a temperature of 80° F. Any table showing the properties of "Freon-12" will tell us this will result in a low side pressure of about 84 lbs. gauge.

Obviously there are some minor objections to subjecting the entire refrigerant system to such pressures, and perhaps much higher ones. Small leaks will be increased. Leaks may be made where **no** leaks were before. If the air conditioning coil is installed in an air duct through which hot air is circulated in the winter time, the low side pressure may rise to some few hundreds of pounds with disastrous ruptures possible. Yet these are not the important objections.

If you look at the manufacturer's performance tables for any compressor you will see a very pronounced rise both in refrigerating capacity and in power consumption with increase in suction pressure. The table at which I happen to be looking shows a rise in capacity of 57% and a rise in power consumption of 25% when the suction pressure is doubled. The reason for these relationships is that the refrigerant gas pumped by the compressor is so much more dense at the higher pressure that the compressor must pump a much greater weight of gas, since its volumetric capacity remains practically constant.

HIGH STARTING LOAD

Since starting the compressor with the low side full of refrigerant means starting up under a much heavier load than the normal running load, it is perfectly obvious that the starting current must be much higher. The result may be that momentary light "flicker" so objectionable to the more "high strung" occupants of the building.

More serious results of excessive starting load is the strain on the motor, the belt drive, the wiring, the compressor, etc. In fact, the wear and tear on the belt may be increased several times, and its life reduced accordingly.

Of course, the automatic unloader provided with many compressors helps the situation considerably. The automatic unloader may take any of several forms. Quite commonly it consists of a clearance pocket which is opened to the compressor cylinder until the compressor comes up to speed, thus reducing capacity and efficiency during the starting period. More often the unloader takes the form of a more or less complicated mechanism by means of which the compressor valves are held open so the compressor does not go to work until it reaches normal speed.

Although a good unloader is quite effective in reducing high current inrush and excessive strains during the starting period, it generally is a rather complicated and expensive feature. Furthermore, there is one serious effect of starting the compressor with the low side full of refrigerant which the unloader is helpless to remedy.

One of the problems always present in the modern air conditioning plant is the strong affinity of "Freon-12" and lubricating oil for each other. I do not mean to say this problem always causes trouble. The point is that the presence of this problem requires certain measures to avoid trouble.

PROBLEM OF 'MISCIBILITY'

This affinity of "Freon-12," the conventional primary refrigerant used in air conditioning work, with the oil used for lubricating the reciprocating compressor, is known by the refrigeration experts as "miscibility."

The lubricating oil with which the crankcase of the compressor is always charged will naturally absorb more refrigerant when the crankcase is full of saturated gas at relatively high pressure, as invariably is the case when the compressor is stopped without first pumping most of the refrigerant out of the low side, and so reducing the low side pressure to a level not much above atmosphere.

So what? Well, suppose that the compressor has been stopped by the thermostat directly, leaving the low side full of refrigerant. Also, suppose the air around the air conditioning coil is around 80° F. As we noted above, the refrigerant pressure on the oil in the crankcase will very soon reach about 84 lbs. Under these conditions, the refrigerant content of the oil is quite high, because the oil absorbs refrigerant rapidly at high pressure.

Now suppose the thermostat up in the room calls for more cooling, and so starts up the compressor. Immediately the pressure in the crankcase is reduced. Of course, such sudden reduction of pressure on the refrigerant in the oil results in a rapid and violent boiling. This violent agitation of the oil means that particles or "slugs" of oil are thrown out through the compressor valves with the gas. Result of this slugging is a lot of unnecessary wear and tear on the valves and may, and often does, result in serious damage to or breakage of valves, or worse.

EFFECT OF SOLENOID VALVE

Now that we have enumerated some of the principal troubles resulting from leaving the low side full of refrigerant during the off cycle, we are ready to see what the liquid line solenoid valve can do about them. To start with, we control the liquid line solenoid valve from the room thermostat, so the solenoid valve is closed when room temperature falls to the thermostat setting.

The continued operation of the compressor after the solenoid valve closes pumps the refrigerant from the low side until the low side or suction pressure falls to the setting of the low pressure control. At this point, the low pressure control cuts the compressor out of operation.

Obviously, the result of this method of control is that there is very little refrigerant left in the low side during the off cycle, and the suction pressure is very low when the compressor is thrown into operation.

The two principal results are that the compressor starts under a very light load because suction pressure is low, and there is very little absorption of refrigerant by the oil in the crankcase because the refrigerant pressure to which the oil is subjected is very low.

In air conditioning service, the low pressure control generally is set to stop the compressor at about 10 lbs., and to start it again when the suction pressure rises to somewhere between 25 and 35 lbs.

This means that the suction pressure when the compressor starts may be around 30 lbs. At this suction pressure, the capacity of the compressor will be about 80% of the capacity at the operating suction pressure of 40° F., while power consumption will be a little over 90%.

As compared to the load on the compressor when starting at 84 lbs. suction when the low side is left full of refrigerant during the off cycle, the load on the compressor when the liquid line solenoid valve is used is only about 40% and power consumption probably around ½ as much.

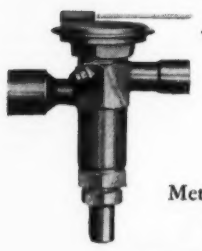
OIL SLUGGING STOPPED

Of course, this means elimination or, at least, reduction of light flicker, and considerable reduction in wear and tear on belts, motors, and other mechanical and electrical equipment. However, the principal benefit is the elimination of oil slugging at the moment the compressor is started.

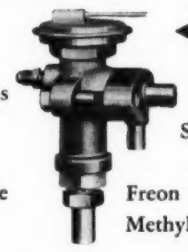
As mentioned above, the proportion of refrigerant absorbed by the oil depends upon the refrigerant pressure to which the oil in the crankcase is subjected. If the low pressure control is set to stop the compressor at 10 lbs., the oil in the crankcase is subjected to a refrigerant pressure of perhaps 10 or 15 lbs. during the off cycle. The result is that very little refrigerant is absorbed by the oil, which means there is very little or no boiling in the crankcase when the compressor is started.

Many refrigeration engineers would not consider putting out a self-contained air conditioner or any other kind of an air conditioning system using "Freon-12" without controlling it through a liquid line solenoid valve, and without installing a heat exchanger for prevention of return of liquid refrigerant to the crankcase in case too much liquid is fed to the air conditioning coil.

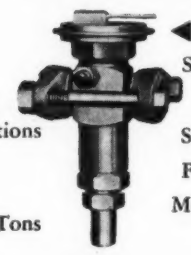
THE ONLY AIR-CONDITIONING AND REFRIGERATION VALVES WITH SELECTIVE CHARGES



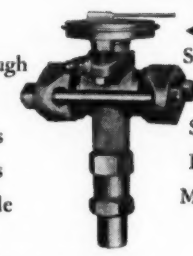
◀ TYPE L — Sweat Connections — Freon 10 Tons — Methyl Chloride 20 Tons



◀ TYPE R — Single Flange with Sweat Connections (Angle) — Freon 10 Tons — Methyl Chloride 20 Tons

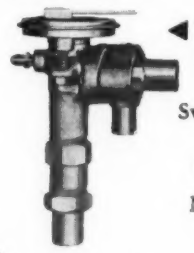


◀ TYPE O — Straight Through Flanged with Solder Flanges — Freon 10 Tons — Methyl Chloride 20 Tons

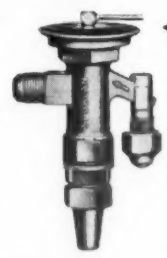


◀ TYPE P — Straight Through Flanged with Solder Flanges — Freon 20 Tons — Methyl Chloride 40 Tons

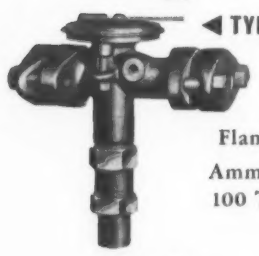
◀ TYPE T — Straight Through Flanged with Solder Flanges — Freon 50 Tons — Methyl Chloride 100 Tons



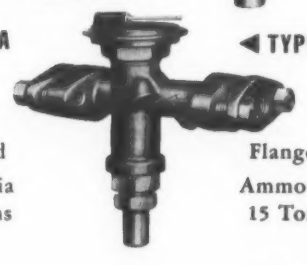
◀ TYPE S — Single Flange with Sweat Connections (Angle) — Freon 20 Tons — Methyl Chloride 40 Tons



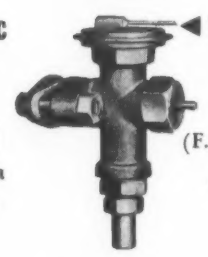
◀ TYPE H — Flare Connections — Freon 3 Tons — Methyl Chloride 6 Tons



◀ TYPE A — Flanged — Ammonia 100 Tons



◀ TYPE C — Flanged — Ammonia 15 Tons

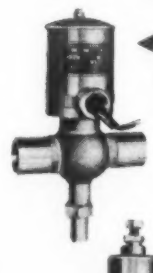


◀ TYPE N — Flanged Inlet — Screwed (F.P.T.) Outlet — Ammonia 15 Tons

◀ TYPES 10 and 20 — F. P. T. Connections — Freon 4 Tons — Methyl Chloride 8 Tons

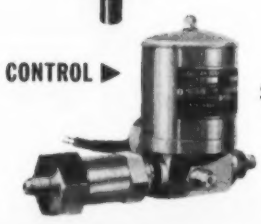
◀ TYPE 30 — Flanged — Ammonia 15 Tons

◀ TYPE 40 — Sweat Connections — Freon 9 Tons — Methyl Chloride 18 Tons

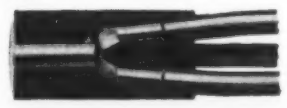


◀ TYPE 50 — Sweat Connections — Freon 20 Tons — Methyl Chloride 40 Tons

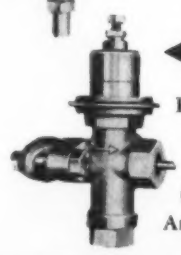
PILOT CONTROL ▶



A Magnetic Shut-off for Sporlan Expansion Valves

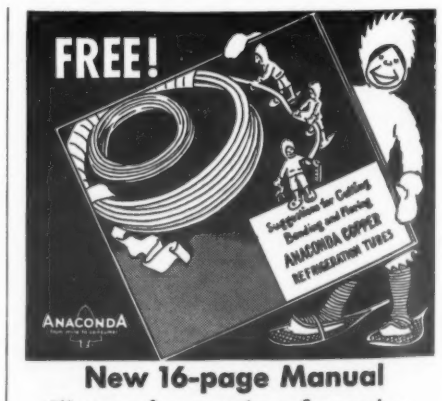


▲ Refrigerant Distributor for Multi-Circuit Evaporators



◀ TYPE PNA — Automatic Expansion Valve — Flanged Inlet — Screwed (F.P.T.) Outlet — Ammonia 15 Tons

SPOEHRER-LANGE COMPANY
3725 COMMOMWEALTH AVE. • • ST. LOUIS, MISSOURI



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Illustrated suggestions for cutting, bending and flaring small diameter copper tubes. Ask for copy.

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Get your share of this fast-growing frozen food locker plant business. *You can* with A-S-E Froz-n-Food UNIT Lockers. We'll be glad to give you all the details. Write us today about the sensational sales opportunity—there is no obligation.

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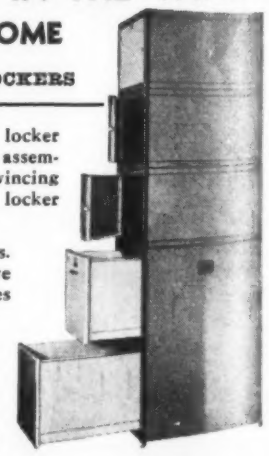


ALL-STEEL-EQUIP COMPANY
Incorporated
111 KENSINGTON AVE. AURORA, ILLINOIS

Method of Creating Circulation In a Drinking Water System Without Pump

By Warren H. Parker, Hasco, Inc., Greensboro, N. C.

It is not necessary to install a circulating pump in order to circulate the water in a drinking water system if the bubblers are installed directly above each other and the piping runs vertically without a lot of elbows, tees, etc., to set up a friction too hard to overcome. The "enjector" system may be employed with highly satisfactory results.

On the installation employing the enjector system showing the layout in the sketch, the temperature difference between the number one bubbler on the fourth floor and number three bubbler on the second floor was 1° F. During the inspection and test it was found that the water would circulate for approximately one hour after the bubbler was opened.

The enjector system is not new as it has been employed by most of the fire departments for years to remove water from basements, etc., where they have been flooded. The use of water to create a vacuum is used in various applications. In refrigeration work it is used to pull a vacuum on coils, condensing units, and other similar parts.

The enjector may be made from a common pipe tee and a hose nozzle or purchased from a plumbing or mill supply house. If you attempt to make one it is a good idea to experiment with the setting before installing in the system.

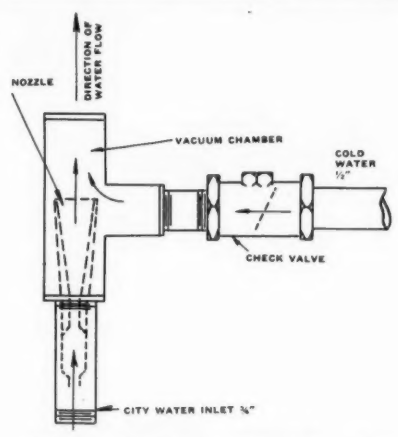
The sketch will give you an idea as to the location of the nozzle. After the final adjustment is made solder the nozzle into the tee securely to prevent leaks and tampering. The only complicated part of the adjustment is the location of the spray nozzle, inside of the tee.

A simple way to test the enjector out is to connect the nozzle to a garden hose. In the inlet side of the check valve attach a small piece of hose and insert it into a bucket of water, turn the water on the garden hose and see if it will lift the water out of the bucket. By various adjustments of the hose nozzle and the location of the nozzle in the tee with various pressures of water on the garden hose you will readily tell the best pull you will have on the bucket of water.

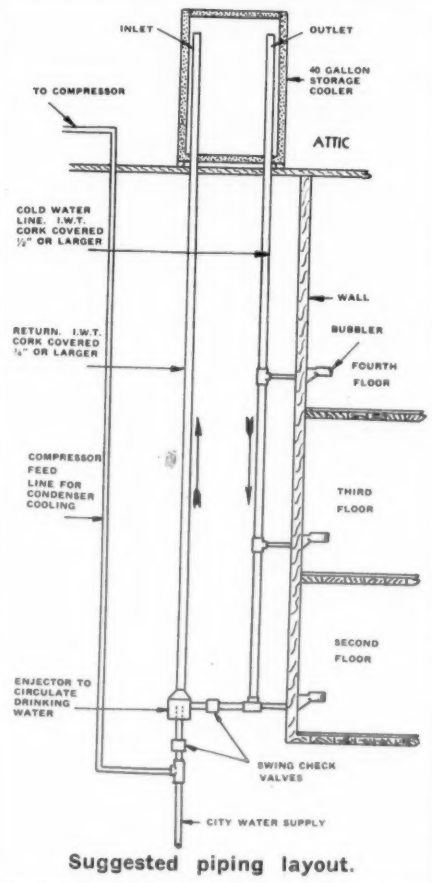
Note that the spray nozzle is located so the city water sprays above the cold water inlet. This is very important, for if the city water inlet falls below the cold water inlet a vacuum will not be created and the enjector principle will not exist.

When any one of the bubblers is opened to permit water to flow out, it releases the pressure on the system while the city inlet water is passing through the enjector, creating a vacuum on the cold water inlet side of the system, pulling the cold water out of the cooler, and circulating it throughout the system. This may also be called a thermo-syphon circulation. The circulation will continue for some time after the bubbler has been closed off. Occasional use of the bubblers will cause a continuous circulation.

When installing any drinking water system regardless of the system used it is a good practice to install a purge valve at the highest point in the line. Most storage-type cooling systems have the valve built into the tank and the air should be purged out at the time the system is being filled with water.



Water flowing through "enjector" nozzle creates partial vacuum in the vacuum chamber, as the water can flow in one direction only.



Suggested piping layout.

Calling the Industry To Order!

This is the style of poster which is being used by members of the Rema to advertise the All-Industry Exhibition. "Drum majorette" motive will be carried out by usherettes at the show. Come and see them in person!

AN OPEN LETTER

To Commercial Refrigeration Dealers

Dear Sir:

Air Conditioning & Refrigeration News -- the weekly newspaper of the industry -- is one paper you can't get free. It's too expensive to publish for that. Hence only the bigger and better and more progressive dealers read it, because only the more prosperous dealers feel they can afford its price.

Limited circulation means concentration on the problems of the better dealers. We aren't trying to interest the fly-by-nighters, and hence don't have to cater to them or write down to them. The NEWS is edited for the men who stand at the head of their class -- the men on whose success the industry depends.

That this policy is appreciated by better dealers everywhere is proved by the fact that for the last 14 years thousands of them have subscribed and continued to subscribe. Result: Today we have a staff of 40, and more than a hundred field correspondents scouring the country for news and ideas about things which interest you.

The fact that the NEWS never has had a free list -- and is going stronger than ever -- indicates in itself that the NEWS has been valuable year after year to a lot of good dealers, or else we wouldn't be in business. Wouldn't you like to give us a try, too? For just $4.00 we'll work for you every day, and report to you every week! Yes, sir! Every week.

Just fill out the coupon on page 37, send it in, and you'll get the biggest $4.00 worth you ever bought.

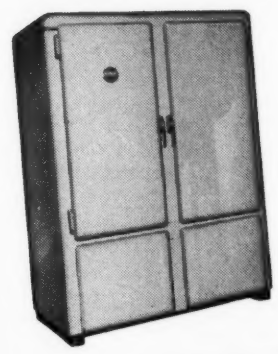
George F. Taubeneck

Editor & Publisher

YOUR CHANCE TO EARN EXTRA PROFITS

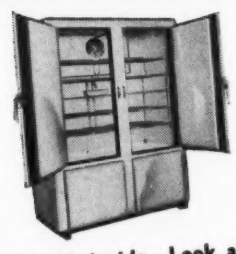
says WILL B. HAPPY

I'm Will B. Happy. I do a nice business selling refrigeration. I fell in love with the 25-cu. ft. Econ-O-Miser the first time I looked at it. You see I sell a big household box now and then, and I do a nice business in small commercials, but I never had one before that fit right in between.

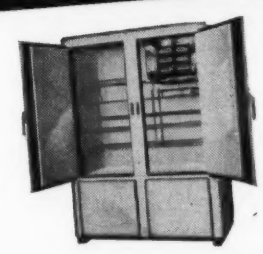


This little 25-cu. footer is a dream. I've made lots of money selling refrigerators, but there was nothing like this before. Here's a cabinet I sell to everyone . . . and every time I make a sale, I sell one of my own condensing units. Ever since I signed with Koch my volume has been soaring.

I've been telling my friends, and they're just as enthusiastic as I am. The butcher, the baker, and the candy-maker all can use a refrigerator like the Econ-O-Miser, and at the price I sell 'em for . . . I don't wonder they're tickled to death. The sweetest part is the mighty swell profit I make.



Look inside. Look at the exclusive Koch air conditioning system. Not an inch of usable space is stolen by a bulky coiling system.



The ice-maker model is the one I sell a lot of. Plenty of ice cubes whenever they're needed . . . yet plenty of storage room.

Guess I could write a book about this fine Koch refrigerator. About the shiny Dulux interior, the one-piece, gleaming porcelain interior, or the heavy insulation. But the story that has sold me completely on Koch is the amount of money I've made selling the 25-cu. ft. Econ-O-Miser. That, my friends, is the sweetest little story I know.

Send me the Koch roll of films about Will B. Happy and the 25-cu. ft. Econ-O-Miser. I want to know the story.

NAME.....

ADDRESS.....

CITY..... STATE.....

KOCH REFRIGERATORS

NORTH KANSAS CITY, MISSOURI

Jobber Puts Ratings of Equipment In Catalog, Basing Them on Experience

By Robert M. Price

MILWAUKEE—A catalog with complete descriptions of parts and supplies and accurate rating of the equipment listed is the best sales ambassador for a refrigeration supplies jobber, in the opinion of Walter H. Anderson, manager of the Milwaukee branch of Thermal Co., Inc.

The catalog is compiled at the company's main office in St. Paul. In making up the catalog, suggestions from the Milwaukee branch as to equipment listings and ratings are incorporated into the finished product.

The ratings given equipment listed in the catalog are based on the company's own experience with this equipment. This policy lessens the possibility of slip-up in filling orders, particularly on mail orders, Mr. Anderson says.

So effective has the catalog been in paving the way for sales that no other form of direct mail is used. Catalog mailing is followed up by a personal call on customers in many cases. Should a customer want personal consultation, a telephone call or a postcard from the customer will bring a salesman.

"We don't want to be classed as 'order takers,'" Mr. Anderson says. "We therefore make available to our customers a free engineering service, figuring on any job at the customer's request. We will not, however, 'sell' the job for the customer. That part of it is up to him.

"We will go out on a job and help him all we can in suggesting the right equipment and installation methods. We have found that if a customer is interested enough to go out on the job with you in an effort to design and install a satisfactory job, the extra time and effort we spend will come back to us in repeat business."

Such repeat business depends on the ability of customers to make satisfactory installations—and at a price that means a fair profit on the work, Mr. Anderson emphasized. "Too many refrigeration men do jobs for practically no profit in order to get the job," he said. "We make it a point to discourage this short-sighted business view. We make every effort to make our customers steer clear of price-cutting."

New business for the jobber depends a great deal on new applications of refrigeration, Mr. Anderson believes. As an example, Mr. Anderson cited the growth of refrigeration in the fur industry in northern Wisconsin. The Thermal Co. has supplied equipment for quite a number of storage boxes to store horse meat used in the feeding of fur-bearing animals. By keeping on top of this trend, Mr. Anderson has been able to create new business.

Another trend that is being followed is truck refrigeration.

"How'll we rate this?" Walter Anderson (right), manager of the Milwaukee branch of Thermal Co., Inc., asks Milan Overbye, salesman for the firm.

Store With Genuine California Influence

From a distance this might look like a fruit dispensing stand or a California supermarket, but in truth it is the new refrigeration parts and supplies store of Refrigeration Supplies Distributors in San Diego. Note canopy, use of knotty pine, and the showcases set into the counter, as well as the neat display of unit equipment in the foreground.

When the San Diego store was opened some time back, the trade turned out to celebrate and Floyd Carley, Temprite west coast representative, helped by demonstrating a Temprite beer cooler. Orville Phillips, far right in the front row, is manager of the store, and Pete Askew, third from right in the front row, is general manager of the company.

MacAllister Appointed Manager of Carl Co.

SCHENECTADY, N. Y.—R. H. MacAllister has been appointed manager of the major appliance department of the Carl Co., G-E dealership here. The store plans to extend considerably for the Christmas season, and will use miniature Santa Claus figures in every refrigerator.

San Diego Trade Drives Right Into New Refrigeration Supplies Distributors Store

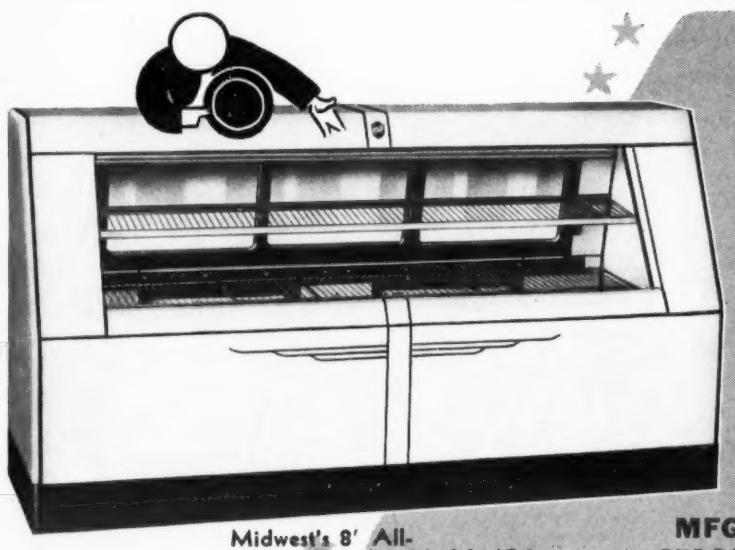
SAN DIEGO, Calif. — Newest branch store of Refrigeration Supplies Distributors, Los Angeles jobber of refrigeration and air conditioning supplies, is located here in San Diego, and serves the territory extending from Oceanside south to the Mexican border and as far east as Yuma, Ariz.

Located in a building formerly used as a garage, the store is designed primarily from the customers' viewpoint. The stockroom has been built along one side of the garage building. This still leaves plenty of room for customers to drive right in and park their cars or trucks on the other side. This parking area will accommodate six vehicles at a time.

Office of the branch is located in the front of the building. General layout in the stockroom was planned so as to display the merchandise to best possible advantage. Fixtures are all of knotty pine, providing attractive and "homey" surroundings.

Orville Phillips, who formerly covered the San Diego territory out of the firm's Los Angeles headquarters, is manager of the new branch here. He is assisted by Claude Rudisil, who handles inside sales.

Peter H. Askew is manager of the Refrigeration Supplies Distributors.



Midwest's 8' All-Porcelain Model MC-8

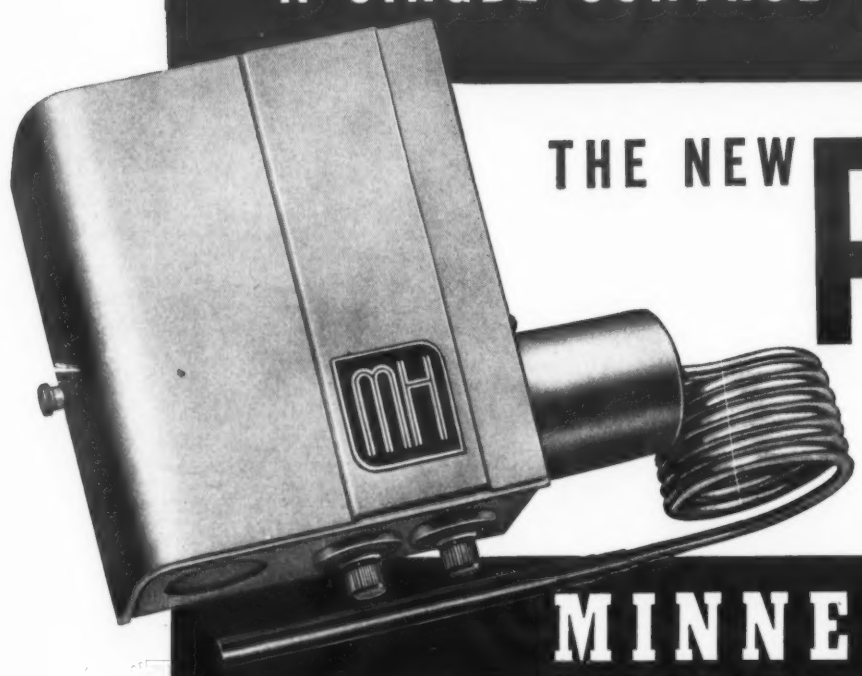
YOU CAN CASH IN ON THESE
Sensational
DISPLAY CASE VALUES

Now—with Midwest's volume production *again* expanded—prices are arranged to make these beautiful, quality-built display cases greater values than ever! That means they're even *easier* to sell! Two lines—all-porcelain DeLuxe line and Leader line with Dulux exterior—fill every need. Write at once for full details.

Midwest
MFG. COMPANY • GALESBURG, ILLINOIS
EXPORT DIVISION, MERCHANDISE MART, CHICAGO

"If it's Midwest-built, it's better built"

A SINGLE CONTROL *Universal in Application*



THE NEW POLARTRON
FOR PRESSURE CONTROL UP TO 1 H.P.A.C.

Separate "On and Off" Knobs ★ Universal Range ★ Capillary Pressure Connections ★ Fewer Models to Stock ★ Minimum Free Service ★ "Cooling Control" on Cut Out or Cut In ★ No Short Cycling ★ Polartron Equipped Compressors can be Converted to Produce Frost-Free Constant Cold

Note these Advantages

MINNEAPOLIS-HONEYWELL
MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
2807 FOURTH AVENUE SOUTH, MINNEAPOLIS, MINNESOTA
CANADIAN PLANT: TORONTO. EUROPEAN PLANT: LONDON. COMPANY OWNED BRANCHES IN 49 OTHER CITIES
REFRIGERATION *Control*
AUTOMATIC CONTROLS MH

Bomb-Proof America Before It's Too Late

That's Role of Air Conditioning in Defense Program, Fleisher Says; Advises Above-Ground Shelters

BUFFALO — The air conditioning industry should assume its place in the national defense program by impressing upon governmental authorities the need for properly ventilated air raid shelters before bombs start falling on this country, Walter L. Fleisher, vice president of American Society of Heating & Ventilating Engineers, declared in a talk before a joint meeting of the Western New York chapter of the society and the Air Conditioning Council of Western New York in the University Club here.

"Our industry now has a practical method of doing something in the war emergency which will yield an economical return," Mr. Fleisher declared. He urged the construction of air raid shelters in populous metropolitan centers above the ground, rather than below the ground, as in England.

GARAGE SHELTER PLAN

Shelters below the ground offer no protection against direct hits, but only against fragments, and do not provide sufficient protection against gas attacks, Mr. Fleisher declared.

He suggested a plan in which six-story garages would be constructed in large metropolitan areas, like New York City. These garages would have reinforced ceilings which could withstand any direct hit. Third floor of the garage would be windowless, and would be the floor where residents of the community would gather during bombing raids.

This floor would be adequately ventilated and lighted, and would be far enough above the ground to offer protection against gas fumes.

"Such a system," he said, "would not only provide protection for the civilian population during war, but it would have a definite value in peace time in solving the parking problem in congested metropolitan areas."

A LESSON FROM ENGLAND

Declaring "we should take Europe as an example of what not to do," Mr. Fleisher described his findings in England, where he spent considerable time making a study of air raid shelters. England, he said, was terribly slow to realize the peril of the situation and didn't begin construction of air raid shelters until she was on the very brink of war.

Even today, England's shelters are inadequate, he said. Most shelters are designed to provide 6 sq. ft. of floor space per person. "When a person is required to confine himself in a space of this size for a period of 12 hours, he is almost willing to take his chances above ground," he declared.

In making plans for ventilation of English shelters, it was found that carbon dioxide given off by occupants also had to be taken into consideration. Machines which provide ventilation in the shelters are equipped with hand pumps, in the event electric power is shut off.

He advised against the use of subways during air attacks, because of the danger from gas, and also because of the possibility that an enemy bomb might break a water or gas main and drown or suffocate the occupants.

FOR SHORT RAIDS ONLY

Most of the hurriedly built air raid shelters in England, he declared, were constructed in the belief that bombing raids would be of short duration and would not have to be occupied so many times a day.

One of the things Mr. Fleisher discovered while in England was that in studying ventilation requirements for air raid shelters, English authorities had made no provision for heat given off by bodies of the occupants. Studies now have been begun to give consideration to this factor.

"We are spending millions for planes—and if we are not building them to keep enemy planes from attacking us here, we are spending a lot of money needlessly," Mr. Fleisher declared. He said if the United States gets into the war the axis powers will drop a bomb on New York City "just to show us what they can do," and a cry will go up in New York for protection that will be the loudest heard since the crash of 1929.

Discussing factors that must be considered in the ventilation of air raid shelters, Mr. Fleisher said the reaction of human beings to certain environments must be determined. He pointed out that in conditions of high temperature and humidity, individuals give out heat which lowers their efficiency and produces pathological results.

BOMBS BIGGEST WORRY

He reported that when he first went to England the people of that country were not much interested in bomb shelters, but were extremely interested in how air conditioning could protect them against gas, which at that time appeared to be the biggest threat to the civilian population.

But as the war progressed, the populace found that bombs from the air were their biggest worry. It was thought that underground shelters would take less cooling, because moisture given off by the body condenses on the cold surfaces of the underground walls.

Pointing out that only now is Rome beginning to talk of the need for air raid shelters, Mr. Fleisher urged men in the air conditioning and ventilating field to take the initiative on the urgency of this matter and bring home to government officials the necessity for adequate preparation in this country.

Clarence A. Gifford, president of the Western New York chapter, Heating & Ventilating Engineers, presided. Edwin R. Cooney, president of the Air Conditioning Council of Western New York, also spoke.

U.S. Submarines use FRICK Refrigeration

And find it the answer to the vital problem of providing fresh foods and cold drinking water for their crews.

In addition to numerous submarines, Frick Refrigeration is used for a variety of services on many destroyers, cruisers, and battleships of the U. S. Navy.

Proud of our part in the Nation's "First Line of Defense," we are equally proud of the service Frick Refrigerating, Ice-making and Air Conditioning Equipment is rendering to more than 50 industries and businesses.

Some good distributor Territories now open. Write for full details.

DEPENDABLE REFRIGERATION SINCE 1862 — FRICK CO. — WAYNESBORO, PENNA. U.S.A.

9-Mo. Cooling Jobs Total 1,100 in New York

NEW YORK CITY — More than 1,100 installations of air conditioning equipment were contracted for in the New York metropolitan area during the first nine months of this year, according to dealer reports compiled by Consolidated Edison Co.

Total installations reported for the nine months amounted to 1,148 jobs, with an aggregate capacity of 15,802.15 hp. This is an increase of 200 installations over August total.

Included in the installations were 1,272 self-contained cooling units, of which 935 were of 1½-hp. capacity or less, and 337 of 2 hp. or larger. By boroughs, self-contained totals were: Manhattan, 1,049; Brooklyn, 103; Queens, 84; and Bronx, 36.

280-Ton Plant To Cool Draftees In Louisiana

ALEXANDRIA, La.—A 280-ton air conditioning system is being installed here by Fairbanks, Morse & Co. to provide more comfortable conditions in a number of buildings being erected by the federal government to provide for the conscripted men who are sent here for training.

W. S. Huey, air conditioning engineer for the Fairbanks-Morse New Orleans office, is in charge of the installation.

By the end of 1941, Alexandria is scheduled to have barracks and training buildings for 70,000 men. These buildings will include 20 or more officers' quarters, commissary buildings, and mess halls which will be completely air conditioned.

The present contract calls for installation of six F-M compressors and distributing duct equipment by Dec. 15 for the use of officers during the first part of the defense training program.

Cooling of Buses Spurs Travel in Southwest

DALLAS, Tex.—Passenger business on streamliner buses of the Bowen Trailways fleet, linking Texas with California and the east, has shown a substantial increase since installation of air conditioning.

Equipped with 5-ton capacity bus air conditioning units, a fleet of 15 streamlined buses, costing $277,500, was put in service on Texas routes this summer.

Why Tokyo Cooling Ban Was Revoked

Tampering With Ventilation Proves Menace To Health

DETROIT—As reported in the Sept. 11 issue of AIR CONDITIONING & REFRIGERATION NEWS, the order causing the "shutdown" of air conditioning systems in Tokyo, Japan in the summer of 1939 as an economy measure was revoked to permit operation of such systems in theaters, department stores, banks, and office buildings in the summer of 1940.

The reason for the lifting of the ban has just been revealed, in an article appearing in a Japanese newspaper, which states:

"Last summer's general ban on air conditioning was clamped on by the authorities as a measure to conserve chemicals used in most air conditioning systems, as well as to conserve electric power. The authorities also thought it would be a good thing for popular spirit, if not for public welfare, if the people were to imagine themselves under a broiling sun on China battlefields while sweltering in uncooled movie theaters.

"Public health inspectors who made a thorough study last summer of the effects of temperature and ventilation on the human mind and body decided otherwise, however, reporting that it was extremely unwise to tamper with the ventilating equipment of public buildings.

"As air conditioning systems in most modern buildings also regulate ventilation, and as the tight insulation required by these systems allows little or no fresh air to enter by other means, the result is that theater patrons inhale the same stale air for hours on end. In view of the over-capacity crowds that shoulder into theaters these days, it actually is dangerous to interfere with air conditioning and ventilating systems, according to the Nichi Nichi. The health officers who investigated conditions last summer found the air positively foul in many theaters, packed to the door with sweating, panting movie fans. Such conditions are particularly dangerous for persons suffering from respiratory ailments.

"Another investigation revealed the amount of electricity consumed by all air conditioning plants was so infinitesimal as to make no difference one way or the other in the capital's power supply, which finding also influenced the police decision, according to the Nichi Nichi."

Dry Goods Buyers Linger Longer Where It's Cool

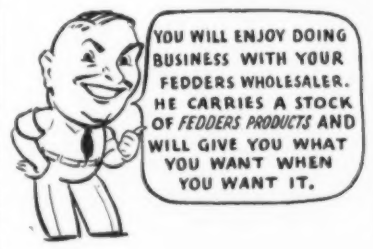
ST. LOUIS—Out-of-town buyers spent more time in the Ely & Walker Dry Goods Co. store than in competitive wholesale dry goods houses here since installation of air conditioning, it is reported.

Cleaner conditions at the store make it possible to display more merchandise with a very low percentage of spoilage resulting, it was said. In addition, cleaning and decorating costs have been reduced.

Fedders announces a new BABY UNIT COOLER

● In response to many requests this new, small size, Model 51 Fed-R-Luxe Unit Cooler, together with Model 354 has been added to the popular line of single and twin models for wall and ceiling installations. Their handsome streamlined cabinets, finished in heat-treated, china-white enamel, and compact sizes meet the demand for smaller and intermediate capacity display cases, reach-in cabinets, florists refrigerators, and other similar installations.

These new Fed-R-Luxe Unit Coolers offer the same proven features as their other brothers, including removable grille for convenience in oiling motor and adjusting valve, all-copper cooling element, adjustable drain trough and quiet operation.


YOU WILL ENJOY DOING BUSINESS WITH YOUR FEDDERS WHOLESALER. HE CARRIES A STOCK OF FEDDERS PRODUCTS AND WILL GIVE YOU WHAT YOU WANT WHEN YOU WANT IT.

FEDDERS NEW 1941 PRODUCTS will be exhibited in Booths 92 and 93 at the Third Annual All-Industry Show in the Hotel Stevens, Chicago, January 13-16.

FEDDERS
MANUFACTURING CO., INC.
BUFFALO, NEW YORK, U. S. A.

Complaints and Remedies In Servicing Counter-Freezers Which Use Brine

Brine Circulation or Brine Temperature Wrong

Editor's Note: This article is one of a series on the servicing of counter freezers and other types of low temperature equipment used in retail stores. This particular part of the series deals with counter-type ice cream freezers, and later articles will give servicing details on frozen food cabinets and ice cream cabinets.

The series is written by Arch Black & Dean C. Seitz, the same men who wrote the "Soda Fountain Manuals" published by the NEWS. Mr. Black is the head of export sales and engineering for Norge Corp., and was formerly with Melchior, Armstrong, Dessau, and Temprite Products. Mr. Seitz is assistant manager of the commercial refrigeration department of York Ice Machinery Corp., and was formerly a vice president of Russ Soda Fountain Co.

By Arch Black and Dean C. Seitz

Service Pointers As They Apply To Brine Systems

In the issues of Aug. 28, Sept. 4, and Sept. 11, general service complaints were discussed as they more or less applied to all types of ice cream counter freezers. These will now be elaborated upon as far as they apply to brine-type freezers and in particular to the present example —the Russ freezer.

Complaint No. 1—Inability To Obtain Desired Over-run

"A"—DASHERS

Cause: Dashers rotate too slowly.

Effect: Slow whipping of mix which may be detected through the front spout. If the dashers have slowed down materially the rotation can be noted by the pulsation of the cream in the front spout.

Remedy: Check the belt for slipping. Tighten the freezer belt by tightening the adjustment bolt "C" on Fig. 9. Then test the brine pump belt to see that it is not too tight. You will find that if the brine pump belt is too tight it will keep the motor pulley from settling into the freezer belts, thereby causing slipping.

Brine pump belt can be adjusted by loosening the four bolts in the motor plate and pushing the motor either to or from the pump as desired. The brine pump belt should deflect about ¾ of an inch when pressed down lightly. After the belt has been checked and found okay, recheck the freezer belt.

"B"—BRINE

Cause 1: Brine temperature too high. (See Effect and Remedy, Aug. 28 issue.)

Cause 2: Brine circulation too slow.

Effect: Slow freezing of cream and overwhipping of mix.

Remedy: To decide for sure whether this is the trouble, check the freezer first. Remove the dashers, be sure the freezer is warm, turn on motor, hold your hand on the bottom of the freezer shell, turn on the brine and see how long it takes before the cold brine comes into the freezer. Also, if you listen closely, you can hear the brine flowing through the freezer.

If the brine does not flow through the freezer as it should and the brine line valves are open (see Fig. 10) the trouble will be one of the following three things:

The pump is not operating.

The brine level in the hardening cabinet is too low.

The strainer is clogged.

The strainer can be cleaned by removing the belt to the brine pump and closing the brine valves (see Fig. 10). Remove the insulation between the valve and the pump, loosen the strap that holds the pump in place where it is screwed on the freezer support, loosen the pipe union, and the strainer is easily accessible. A large side-opening monkey wrench is usually the handiest to use for this purpose.

Complaint No. 2—Excessive Freezing Time

"A"—HIGH TEMPERATURE

Cause: High brine temperature.

Effect: Excessive time required to remove heat from the mix.

Remedy: This can be caused by one of two things: either the refrigerating system is not functioning correctly, or the brine has been frozen around the coils. By using the brine tester as has been explained in previous articles, it is easy to read directly the freezing point of the calcium chloride brine when its temperature is between —20° F. to +120° F. which saves considerable time and guess work.

'B"—BRINE CIRCULATION

Cause: Brine does not circulate.

Effect: Freezer continues to run; although the brine temperature is low in the hardening cabinet, it does not chill the freezer door. This can easily be checked by removing the dasher, turning on the freezer motor, holding one hand on the freezer cylinder and directing the brine through the freezer. If it is operating correctly, the brine will flow through the freezer at such a rate that it will freeze one hand to the side wall.

Remedy: Check the height of brine in the cabinet, rotation of the pump, and freezing point of the brine.

If all these points check correctly remove the insulation between the brine pump and the 1-inch gate valve. Close the two 1-inch gate valves, loosen the pump straps, and then loosen the union and slip the pump back. Strainer is inserted in the union which can be noted on Fig. 10.

Complaint No. 3—High Brine Temperature

Check brine freezing point.

Check expansion valve (moisture or incorrect setting).

Check amount of refrigerant in the system.

Check inefficient condensing unit.

"A"—BRINE FREEZING

Cause: Brine freezing around coils.

Effect: Compressor running long cycles and suction line frosting further back toward the compressor than ordinarily.

Remedy: Let the cabinet warm up and remove a portion of the brine. The amount to be removed is governed by the freezing point of the brine. Strengthen the brine solution and refill as previously instructed. The brine should test at 60° F. with a specific gravity of 1.29 or a salometer reading of 1.32. Inasmuch as the procedure to be taken to check the other points is known, no further mention is being made here.

Complaint No. 4—Brine Temperature Rises Too Fast

If the brine temperature rises too fast, it can only be one of the following:

(1) Brine has frozen around the brine coil.

(2) Expansion valve not adjusted correctly.

(3) Moisture in expansion valve.

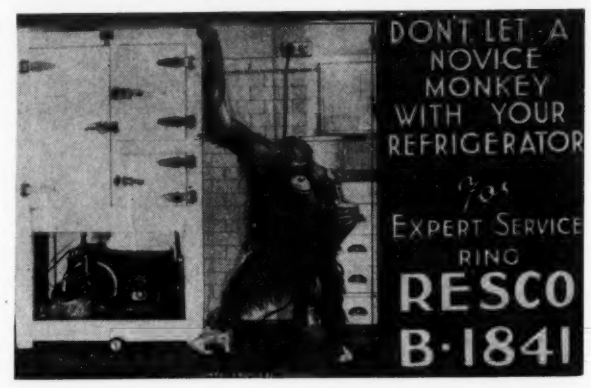
(4) Shortage of refrigerant.

(5) Inefficient condensing unit.

(6) Inefficient heat interchanger.

Under this complaint No. 1 has already been explained above and the cause, effect, and remedy of the others have been explained in previous articles so the procedure to be taken is known to the reader.

'Monkey Business' Advertises a Service Business



This card is used by Refrigeration Engineering Service Co., Ltd., 24 Bart St., Sydney, Australia to promote its refrigeration service operations. The card was received by Ranco, Inc. from E. Marden of the Australian firm.

Texaco Charts Shows Proper Oil For 55 Refrigerators

NEW YORK CITY—Charts showing the recommended grade of Texaco Capella oil for use in 55 different makes of electric refrigeration units and 32 different brands of air conditioning units have been published in the form of a four-page 8½ x 11-inch folder by the Texas Co., producer of Texaco products.

These charts give the name and location of the manufacturer of each unit listed, the types of compressors they manufacture, and the refrigerants used.

Lubrication recommendations also are given for compressors, classified by type of machine and kind of refrigerant, and for auxiliary equipment such as motors and fans.

Introduction to this folder explains that the choice of the proper viscosity oil for any refrigeration equipment is contingent upon three factors—the size of the unit, the design of the compressor, and the refrigerant used.

General recommendations and suggestions are then offered as to the selection of the proper grade of oil for various applications.

A MESSAGE TO ALL VIRGINIA JOBBERS

THE VIRGINIA SMELTING COMPANY
MANUFACTURERS OF LIQUID SULPHUR DIOXIDE
BOSTON, MASS.
TELEPHONE HUBBARD 5635 P. O. BOX 1422

November 25, 1940

Gentlemen:

As we inventory the results of the most successful refrigerant sales year in our history, we wish to thank you, our jobbers, for your important part in this success.

One policy, more than any other, we believe, has helped us all to achieve this record - our policy of working as closely as possible with you at every step.

In this year to come, we look forward to an even closer cooperation, and an even more profitable partnership with our jobbers in selling Virginia refrigerant products.

With cordial best wishes,

Augustus H Eustis

A. H. EUSTIS, President

VIRGINIA

"We'll Show You at the Show that DAVISON'S SILICA GEL IS THE BEST DRYING AGENT THAT YOU CAN BUY"

SEEING IS BELIEVING

SEE for yourself the *proof* of the superior performance of Silica Gel. SEE why Silica Gel has been adopted as standard by most well known manufacturers of refrigeration equipment. SEE SILICA GEL IN ACTION at the Third Annual Refrigeration and Air Conditioning Exhibition.

KEEP THIS IN MIND

The Silica Gel Exhibit and Demonstration will be at BOOTHS 47-48. Come and see us—we promise that your visit will be interesting and instructive.

THE DAVISON CHEMICAL CORPORATION
Silica Gel Department
BALTIMORE, MARYLAND

Chicago Department Stores Will Stick To 'Name' Lines For 1941

• • •

Major Stores Show No Desire For 'Brands' But Would Like 'Promotional' Series

(Concluded from Page 1)

be the case in 1941. While, in some instances, several lines of 1939 close-outs were handled at the season's outset, once these were cleared away the stores settled down to doing a real job with two or three lines.

For another thing, all three stores planned to get their 1941 refrigerator licks in plenty early, without waiting for the so-called "season" to arrive. As soon as the new lines are out—which all stores hope will be early—the promotional guns will begin peppering away at prospects. This year's season carried through to September; so why, they reason, can't the 1941 "selling season" begin in January just as well as in March—provided, of course, that the new models are out by then.

Satisfied With 1940

What did the 1940 prices do to the stores' volume? Not a great deal of damage on the red side of the ledger, apparently. At least there weren't any complaints. Average unit price for this year was between $135 and $140—with the "specials" bringing in lots of traffic that "took" to selling-up tactics.

At the Boston Store, Department Manager Jaretta was so busy with oil heater business that he really hadn't time to work out any definite plans for next year's refrigeration selling—but he reported that, as far as he was concerned, no major changes were in the offing. Refrigerator sales this year are more than 20% higher than last year, and easily the best in the company's experience.

Average unit sale this year was around $135; last year it ran between $160 and $170, but this year's added unit sales made the total dollar volume about the same.

The store sells Frigidaire and Kelvinator lines and its own "Arctic Queen" unit, a low-priced ($99.50) promotional model played heavily as a traffic-puller from which the store's salesmen attempt to sell-up to the "line" boxes of either of the two national makes.

But the jump this year was rather hard to make, Mr. Jaretta reported, and he's trying to work out some arrangement that will give him less than a $30 step-up to regular line models. He's planning another rather important change next year—the "season" is going to start in January, instead of March. Mr. Jaretta figures that in the past somebody's been getting some business during January and February—in 1941 he's going out after a piece of it.

3 Lines at Fields

A new location in the store is going to be about the only change in the Marshall Field refrigerator department over last year, for Manager Dick Bonn is planning to carry through on the lines the store sold in 1940. Frigidaire, General Electric, and Kelvinator are the store's three lines—no private brand line has been carried for some years.

The department's new location affords better display space, but not as much of it as was formerly the case—so no increase in lines is contemplated. And with prices as low as they were in 1940—and, Mr. Bonn believes, will continue to be in 1941—pushing a private brand, unless it's very well accepted, is just a waste of time.

Average Unit Price Above $135

This year's average unit price was above $135—considerably lower than in 1939—but if the 1941 average hangs somewhere around that level nobody at Field's is going to shed many tears. Refrigerator volume was good this year.

Trade-ins have become a problem of some proportion this year, Mr. Bonn reported. So far, each deal has been handled without benefit of "blue book," and strictly on the merits of the individual unit involved. Top trade-in units sometimes find they way to the department floor, but in most cases the store disposes of them outright to a used refrigerator dealer in the city. A break-even deal on sales of this kind is about all the department hopes for as things now stand.

One new product—the Deepfreeze storage unit—may possibly be added to the Field's refrigeration lineup, but Mr. Bonn does not expect it to develop a great deal of volume for the department without considerable missionary work, since in a market like Chicago it would necessarily be aimed at upper-crust families.

Refrigerator volume at the Fair department store has topped 600 units, at an average price of around $140, since Department Manager Milestone came over from Sears in April, and that leaves no great cause for complaint—but Mr. Milestone believes his business would be much better if manufacturers would make their sales policies flexible enough for outlets like his to match the chains "special" for "special" in going after the late-season sales.

An Old Sears Man Sighs

The Fair puts all its sales push behind two lines, Frigidaire and General Electric—and boy! How Mr. Milestone would love to see some promotional models in these lines that he could really promote!

An old Sears man, he has a lot of admiration for that company's merchandising flexibility, and it irks him that he can't carve himself a big slice of fall business, "sale" for "sale" and "special" for "special," with just a couple of models on which he could vary—and advertise—the price to meet year-end buying conditions.

Suggests Two Lines

Why can't manufacturers produce two lines—one a "regular," on which the price—as now—is standard the year around, and the other a promotional series, on which pricing would be left flexible enough to permit the advertising of "specials" as sales get tougher toward the end of the year? That's the question Mr. Milestone asks.

Introduction of new models could be advanced, too—but even without that, a little more flexibility would go a long way toward keeping the independent dealer from developing into a downright chiseler, Mr. Milestone believes.

The way things are now, other dealers have to cut to meet the chains' prices, but they can't advertise it—so what does that make them, when you get right down to it? Mr. Milestone just snorts.

Maybe Rebuilts

He hopes the big companies will come around to his way of thinking—if they don't, he may try another answer . . . rebuilt refrigerators. With these, he thinks, he can out-special even the "specials." It may not be quite as effective as a promotional line of new equipment, but it will be one way of getting buyers' attention, no matter what season of the year it is.

Don't get Mr. Milestone wrong—business was plenty good in 1940, and he's not kicking about the slice he was able to get . . . but he still thinks there's a lot more to be had—if he could only match the chains' tactics.

Perhaps rebuilt refrigerators offer him the opportunity he is seeking.

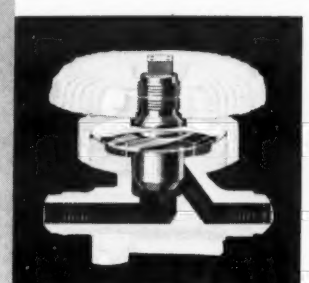
Bad Luck Follows Good Luck For Carolina Dealer

OXFORD, N. C.—Luck both good and bad has tagged the Reynolds Electric Co. here recently. On one day the company was awarded the grand prize check in Carolina Power & Light Co.'s "Stepping Along With '40" campaign—and on the very next day the company's store was completely destroyed by fire.

As to the prize-winning, A. B. Wilson, the store's salesman, deserves much of the credit, for he sold most of the merchandise. Mrs. J. M. Royster is bookkeeper. George Fox and Arthur Currin handle service and installation.

As to the fire, J. H. Reynolds, proprietor of the business, has announced his intention of opening up a new store here soon.

Original Equipment
ON POPULAR MAKES
OF ICELESS UNITS



WEATHERHEAD
Refrigeration Valves, Fittings and Accessories

See us at Booth 336-337-338, Stevens Hotel, Jan. 13 to 16.

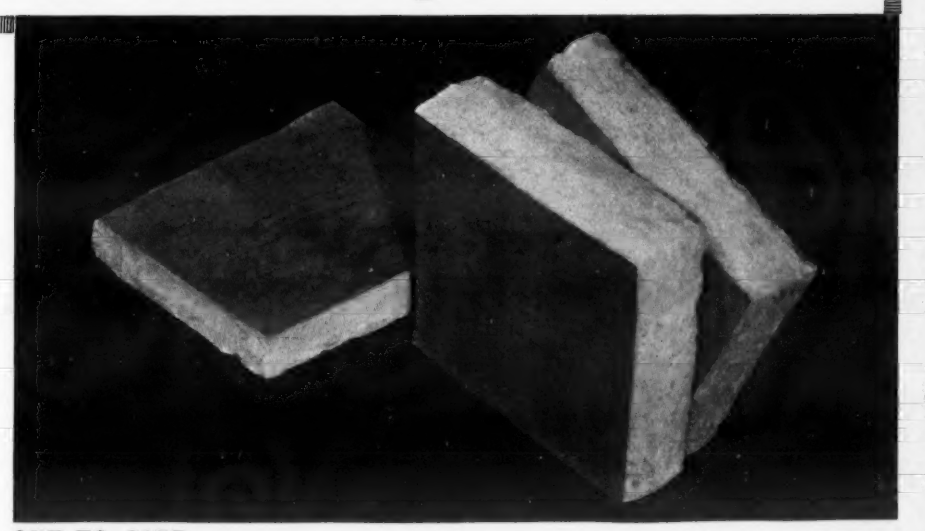
Better service men use them—Leading jobbers stock and sell them.

THE WEATHERHEAD CO.
300 East 131st Street, Cleveland, Ohio

Now...
Enjoy the advantages of Dry-Zero at the cost of ordinary insulation

New Bound-Batt Form Cuts First Cost and Installation Costs

There is no need to equip your commercial boxes with an insulation that soon becomes water-soaked and useless. Lifetime Dry-Zero is now available in a new lower priced, easy-to-apply form, whose over-all cost is no greater than that of the insulation you now use. In the new Dry-Zero Bound-Batt, the fibres are held together by a fine binder and covered with a special asphalt-coated paper. The batts are stiff enough to handle readily, yet flexible enough to fit irregular contours—ideal for high-speed production.



CUT TO SIZE—Dry-Zero Bound-Batt can be furnished in rectangular shapes up to 36 inches wide in any length.

ROLLS—Dry-Zero Bound-Batt is also available in 25-foot rolls that can be easily cut on the job to any size.

THREE FORMS

Dry-Zero Bound-Batt is supplied in rolls that can be kept in stock and readily cut on the job to any size or shape. It is also available in slabs, cut to any specified rectangular size. Both rolls and slabs can be furnished with a sealing flange for attaching and sealing edges to the refrigerator framing.

DRY-ZERO Advantages

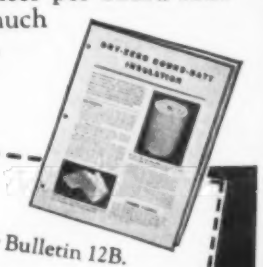
High Efficiency—Dry-Zero is the most efficient commercial insulant known. It has a "*k*" factor of 0.24, as established by nationally known, impartial authorities.

Moisture Resistance—The waxy fibres do not absorb moisture or draw it up by capillary action. Hence, even under humid conditions, Dry-Zero retains its heat-stopping efficiency.

Long Life—Dry-Zero will not disintegrate, rot, or absorb odors. Severe jolting does not cause it to pack.

Light Weight—Dry-Zero weighs less than two ounces per board foot—only 1/7 as much as corkboard.

Send for New Bulletin 12B



Dry-Zero Corporation
Merchandise Mart, Chicago
Please send me a copy of your Bulletin 12B.
Name ..... Title .....
Company .....
Address .....

DRY-ZERO
BOUND-BATT
THE MOST EFFICIENT COMMERCIAL INSULANT KNOWN

Increase in Refrigerator Rebuilding Shown by Report of Associated Plant

71% of Traded-In Units Are Rebuilt

(Concluded from Page 1)

value to some refrigerators such as Majestic, etc. As a result most dealers refuse to trade these boxes in, or if they do, they dispose of them to a junk man. As a result the number of "to be junked" refrigerators received by the rebuilding plant decreased markedly, forcing up "rebuilt" and "as is" purchases.

(3) The promotion of the $114.75 refrigerator this year has caused an unprecedented demand on the part of dealers for a really low priced "leader" in the rebuilt field, that is, the $39.50 box. Advancements in rebuilding technique allowed the plant to put out and guarantee such refrigerators this year, which perform satisfactorily but which are older and do not have the style of the higher-priced rebuilts.

A greater number of traded-in refrigerators were sold "as is" this year because of the fact that the Associated Refrigerator Plant segregated a number of "orphan" makes and disposed of them to agencies who specialize in the breaking up of these boxes for use and sale of parts.

Declaring that the "dealer has little to fear from trades" if he follows sound practices, Andrew J. Asch, Jr. of Associated Refrigerator Plant makes the following analysis of Part 2 of the survey:

"You will note that of the 1,200 boxes considered, which were selected from the 'big five' makes (Frigidaire, General Electric, Kelvinator, Norge, and Westinghouse), 96% of the trade-ins were of 1928 to 1934 vintage or from six to 12 years of age; 87% were of 1928 to 1933 vintage; and 60% were of 1928 to 1932 vintage.

"It therefore becomes apparent that the dealer trading from 50 to 100 refrigerators a year has little to fear from encouraging trades. The law of averages will protect him if he trades on allowances as stipulated in the Blue Book. Nine times out of 10, he can re-sell the box for the value allowed and if he so desires he can send it to a reconditioning agency for rebuilding and then re-sell it at a profit as a guaranteed box. In any event, in this area he can always dispose of his box to Associated Refrigerator Plant for one-half of the value as stipulated in the Blue Book, no matter whether the box is running or not, so long as it is complete.

"Inasmuch as the average allowance between the years 1928 and 1933 is somewhere in the neighborhood of $7 to $10, the amount which the dealer would find it necessary to absorb would be insignificant."

Looking towards next year and a new edition of the Blue Book, the sponsors of the book have indicated that values should be increased somewhat. Reason: dealers are becoming more accustomed to handling trade-ins, know how and where to dispose of them and hence are in a position to get more money for them. New model prices will probably increase slightly and hence the values of trades will go up.

Sears, Roebuck, which has more or less "laid off" of trade-ins until the present year, has been working on a strict Blue Book basis in the Philadelphia area, Mr. Asch reports.

Sears' stores in the area are selling rebuilt boxes. These cabinets were refinished by the Associated Refrigerator Plant, all shelves were retinned, ice cube trays bright-dipped, door gaskets replaced, chromium refinished, etc. Sears undertook to rebuild all the units in their factory.

Some of the boxes were taken in trade by Sears and sent to the plant under its dealer reconditioning plan, and some were Coldspots which the plant had purchased from dealers in this area and sold to Sears.

Right now Associated Refrigerator Plant is busy trying to get cooperation from manufacturers on its plan to have low cost units for replacement supplied to the plant by the manufacturers themselves.

"Two manufacturers have already indicated their interest in this plan whereby we would send units for replacement to their factory and refinish cabinets here," says Mr. Asch. "We would then sell these boxes to their distributors and dealers to be used for promotional sales purposes. On this basis the trade-in market could be kept absolutely clean.

"Guarantees from original manufacturers could be put on merchandise of this type and same could be sold by dealers and distributors with the knowledge that their service costs would be kept to a minimum. Furthermore, we would actively cooperate with manufacturers on the scrapping of obsolete or undesirable models, and could arrange for the export of many units that could be equipped with off-cycle and voltage motors."

Disposition of 2,498 Traded-In Refrigerators

Make of Refrigerator	Total No. Each Make Received	% Of the Total	No. Rebuilt Or to Be Rebuilt	No. Scrapped (Junked)	No. Sold "As Is"	% of Each Make Rebuilt Or to Be Rebuilt	% of Each Make Scrapped	% Of Each Make Sold "As Is"	% of Total Rebuilt Or to Be Rebuilt	% Of Total Scrapped	% of Total Sold "As Is"
Apex	18	0.72	13	2	3	72.2	16.7	11.1	0.52	0.08	0.12
Atwater Kent	12	0.48	12	0	0	100.0	0.0	0.0	0.48	0.0	0.0
Bohn	7	0.28	2	3	2	28.6	42.8	28.6	0.08	0.12	0.08
Buckeye	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.04	0.0
Cavalier	5	0.20	0	4	1	0.0	80.0	20.0	0.0	0.16	0.04
Coldspot	98	3.92	79	16	3	80.6	16.3	3.1	3.2	0.64	0.12
Copeland	43	1.72	14	15	14	32.6	34.8	32.6	0.56	0.60	0.56
Crosley	56	2.24	46	5	5	82.2	8.9	8.9	1.8	0.20	0.20
Dayton	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.04	0.0
ElectrIce	2	0.08	0	2	0	0.0	100.0	0.0	0.0	0.08	0.0
Electrolux	55	2.20	25	0	30	0.0	0.0	0.0	1.0	0.0	1.20
Frigidaire	507	20.28	392	80	35	77.4	15.8	6.8	15.7	3.20	1.40
General Electric	489	19.56	391	90	8	80.0	18.4	1.6	15.7	3.60	0.32
Gibson	44	1.76	15	24	5	34.1	54.6	11.3	0.6	0.96	0.20
Glacier	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.04	0.0
Grunow	107	4.28	0	11	96	0.0	10.3	89.7	0.0	0.44	3.84
Hotpoint	9	0.36	7	1	1	77.8	11.1	11.1	0.28	0.04	0.04
Ice-O-Matic	2	0.08	0	0	2	0.0	0.0	100.0	0.0	0.0	0.08
Jewett	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.04	0.0
Kelvinator	319	12.76	263	34	22	82.4	10.7	6.9	10.5	1.36	0.88
Leonard	98	3.96	95	1	2	97.0	1.0	2.0	3.8	0.04	0.08
Majestic	38	1.55	11	17	10	28.9	44.8	26.3	0.44	0.68	0.40
Mayflower	55	2.20	45	7	3	81.8	12.7	5.5	1.8	0.28	0.12
Merchant & Evans	25	1.00	0	19	6	0.0	76.0	24.0	0.0	0.76	0.24
Mohawk	28	1.12	20	3	5	71.5	10.7	17.8	0.80	0.12	0.20
Montgomery Ward	6	0.24	6	0	0	100.0	0.0	0.0	0.24	0.0	0.0
National	1	0.04	1	0	0	100.0	0.0	0.0	0.04	0.0	0.0
Norge	203	8.12	194	7	2	95.5	3.4	1.1	7.8	0.28	0.08
Philadelphia Electric	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.0	0.0
Seeger	12	0.48	0	9	3	0.0	75.0	25.0	0.0	0.36	0.12
Servel	25	1.00	0	19	6	0.0	76.0	24.0	0.0	0.76	0.24
Socold	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.04	0.0
Sparton	28	1.13	14	11	3	50.0	39.2	10.8	0.56	0.44	0.12
Starr-Freeze	2	0.08	0	2	0	0.0	100.0	0.0	0.0	0.08	0.0
Stewart-Warner	27	1.08	27	0	0	100.0	0.0	0.0	1.1	0.0	0.0
Trukold	1	0.04	0	0	1	0.0	0.0	100.0	0.0	0.0	0.04
Trupar	4	0.16	0	4	0	0.0	100.0	0.0	0.0	0.16	0.0
Universal Cooler	21	0.84	19	1	1	90.4	4.8	4.8	0.76	0.04	0.04
Wayne	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.04	0.0
Welsbach	18	0.72	0	14	4	0.0	77.8	22.2	0.0	0.56	0.16
Westinghouse	80	3.20	75	4	1	93.8	5.0	1.2	3.0	0.16	0.0
White Mountain	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.04	0.0
Wurlitzer	8	0.32	7	0	1	87.5	0.0	12.5	0.28	0.0	0.04
Zerozone	22	0.88	11	9	2	50.0	40.8	9.2	0.44	0.36	0.08
Frantz	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.04	0.0
Grinnell	1	0.04	0	0	1	0.0	0.0	100.0	0.0	0.0	0.04
Chill-Well	1	0.04	0	0	1	0.0	0.0	100.0	0.0	0.0	0.04
Commander	4	0.16	2	1	1	50.0	25.0	25.0	0.08	0.04	0.04
Jewell	3	0.12	0	2	1	0.0	66.7	33.3	0.0	0.08	0.04
Crusader	1	0.04	0	1	0	0.0	100.0	0.0	0.0	0.04	0.0
Ilg-Kold	4	0.16	0	2	2	0.0	50.0	50.0	0.0	0.08	0.08
Totals	**2,498**	**100.00**	**1,786**	**429**	**283**				**71.56**	**17.16**	**11.28**

Note: It should be borne in mind when interpreting this survey that the following factors were present:

1. No weighting of these figures was made to compensate for sales conditions during the past years (popularity of various makes).
2. No weighting of these figures was made to compensate for the fact that some brands were not produced at all or in any quantities during the early years.
3. These figures included only refrigerators purchased by the Associated Refrigerator Plants, Inc. No boxes sent in for reconditioning are included.

Summary of Ages of 1,198 Trade-In Refrigerators

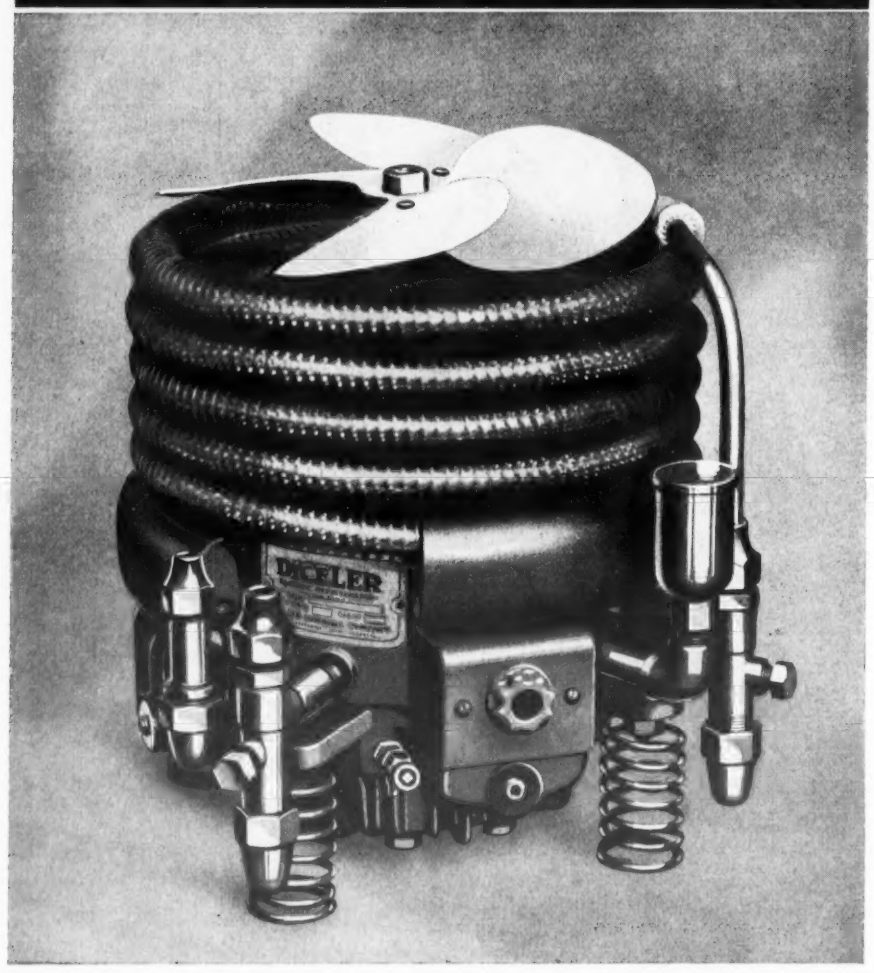
Boxes Received	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	Totals
Frigidaire	29	62	127	8	17	17	79	14	7	2	0	362
Westinghouse	0	0	0	0	14	42	15	7	0	0	0	78
Norge	0	0	0	0	85	19	37	9	1	0	1	152
General Electric	0	59	104	58	63	18	43	33	5	0	0	383
Kelvinator	0	10	21	21	20	36	65	42	6	2	0	223
												1198

Percentages of Boxes Traded in within Years As Listed Below on Basis of Above Survey

1928—1931	56%
1928—1932	67%
1928—1933	87%
1928—1934	96%

DEISSLER 4 CYL. RADIAL

It's Revolutionary!



1/6, 1/4 and 1/3 H.P. Models. A.C. or D.C.

For Water Coolers, Beverage Coolers, Refrigerators and any Commercial application within its capacity.

Scores of Manufacturers, Designers and Users acclaim this superior condensing unit—possessing features not offered in any other refrigerating mechanism.

A Few of Its Important Features

New sealing and oiling system.
New economy of operation.
New smoothness and quietness.
New compactness and efficiency.
Overlapping compression impulses.
No belts or pulleys.
Built-in motor, direct connected.
Automatic overload protection.
Compressor and motor parts accessible.
Fully guaranteed.

See this condensing unit demonstrated, also our new line of air and water cooled commercial condensing units 1/3 H.P. to 30 H.P. with NEW DESIGN, NEW FEATURES and NEW PERFORMANCE, at our Booth 334

Third Annual All-Industry
Refrigeration and Air Conditioning Exhibition
Chicago—January 13-16, 1941

DEISSLER MACHINE COMPANY
Greenville, Pa., U. S. A.

Pioneer of Four Cylinder Compressors for Refrigeration.

$125.00 LIST FROZEN FOOD CHEST

This Amazing Price . . . This Amazing Value Has Created Instant Acceptance for the Arctic Trunk

●A month old! And already hundreds of orders, telegrams, letters have poured in. That's the proof of the pudding! Interest in commercial and home frozen foods now at high peak. Get set to get your share of the business. The Arctic Trunk will do it. A utility product built on a quality line production basis with all gadgets removed—that's the reason for its low price. Maintains temperatures from 15° below to 5° above zero; net capacity 3 cu. ft.; holds up to 100 lbs. of frosted foods; trouble-free sealed unit. Five year guarantee.

Write for Franchise Plan.

ARCTIC ZERO TRUNK COLD

JEWETT REFRIGERATOR CO., INC.
ESTABLISHED 1849
BUFFALO • NEW YORK

If you like this issue of the News—

send us your subscription!

TO the thousands of our regular subscribers this is just another issue of the NEWS which comes to them regularly every week.

But to the many others who are not regular subscribers, this issue is being sent to arouse interest in the All-Industry Refrigeration and Air Conditioning Exhibition at the Stevens Hotel, Chicago, in January. This is an exhibition that no one actively engaged in the industry can well afford to miss.

To those who are not regular subscribers: study this sample copy of the NEWS. We hope you will find much of interest in it. If you like it—send us your subscription and let the mailman deliver it to you every week.

Commercial—

The NEWS is especially popular with distributors, dealers, and service men in the commercial refrigeration field, because of the great quantity of valuable commercial news and information it brings to them. The NEWS is the ONLY publication in the commercial refrigeration field. New developments in products, new applications, improvements in installation methods, new markets and how they are cultivated, all show the way to increased sales volume—*read the* NEWS!

Service—

To the service man, whether he be employed by a dealer or distributor or whether he be in business for himself, the service articles in the weekly issues of the NEWS alone have often been said to be worth more than the modest subscription price. For in these service features are found the answers to the most perplexing problems the service man encounters. These articles are *practical.*

Generally speaking, one of the services brought to you by the NEWS and which is regarded as one of the most valuable to *all* subscribers consists of *sales ideas* and *sales plans.*

These sales suggestions are distinctly not the pipe dreams of a ghost writer sitting at a desk. They are gathered by trained and experienced staff writers who go out into the field and dig them up from successful, money-making merchandisers.

This digging up process is no lazy man's job. But these staff writers get the goods—and pass their findings on to you, through the NEWS, so that you may benefit from the successful experiences of others.

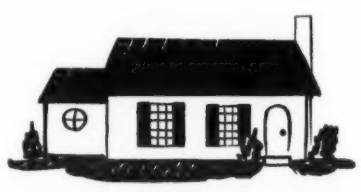
Red Hot News!

This is a constantly changing and quickly shifting industry. To those who desire to keep up with the times, to have a full understanding of what's going on, to know the market as it changes from week to week, the NEWS performs a valuable service. News of products, news of plans, news of ideas, news about your competitors, news of people—news, news, news! All of interest and importance to you—and certainly well worth the subscription price of $4 a year. Do yourself a favor. Tear off the coupon down below, fill it in, and mail it to—

AIR CONDITIONING & REFRIGERATION NEWS

The Newspaper of the Industry

5229 Cass Ave., Detroit, Mich.

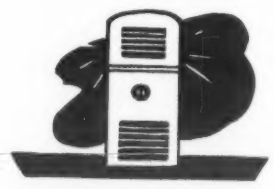


Household—

In the weekly issues of the NEWS you will find a wealth of information on household refrigerators and the household market all through the year. New models, new prices, new marketing plans as they are announced by all manufacturers in this field. Coming to you fresh every week you get the story on new gadgets, new conveniences, new sales plans—*while the story is new.*

In the very near future new 1941 models will be announced. All new models of all makes will be fully reported and illustrated in the NEWS, *before* they are announced elsewhere. Promptly, accurately, completely.

And you will certainly want your copy of the Annual Specifications Issue giving complete specifications of all models of all makes. This is included in your regular subscription, and is worth the entire cost.



Air Conditioning—

Many subscribers for the NEWS have found the selling of unitary air conditioning equipment both interesting and profitable. Especially window and floor-type room coolers and the 3, 5, 7½, and 10-ton store-type units. The NEWS brings to you the happenings and changes in this industry as they occur from week to week. News of products, news of markets, surveys of installations.

FREE *with your subscription*

If your subscription expires during December and your renewal order is received before Jan. 1 you will receive a copy of the new 1941 Air Conditioning & Refrigeration Directory at no charge. Renew your subscription now.

To non-subscribers: your subscription, if received during December, will entitle you to a copy of this new Directory. This handsome, informative volume is the recognized Blue Book of the industry. Send your order today.

e he published in January

Air Conditioning & Refrigeration News
5229 Cass Ave., Detroit, Mich.

Gentlemen: I want to take advantage of your special December offer of a one-year subscription for the NEWS and a copy of the new 1941 Refrigeration & Air Conditioning Directory—both for the price of $4. ☐ Enclosed is $4. ☐ Bill me.
☐ $2.00 enclosed. Send bill for balance in 60 days.

Name .....

Street .....

City ..... State .....

New Hallwood Locker System Utilizes Chain Drive Principle of Operation

COLUMBUS, Ohio—A new type of locker plant system in which the tiers of lockers are moved around an elongated oval in a refrigerated room by means of a chain drive—the patron stands in a room of normal temperature and simply pushes a button to bring his locker around into position behind a door leading into the locker room—has been developed by Nathan A. Hallwood of Columbus.

Mr. Hallwood, long experienced in the development of such mechanical devices as cash registers, automatic merchandisers, and computing weighing devices, will handle only the locker system itself. Refrigerating equipment will be supplied by each plant owner or builder. Installation engineers will supervise the plant construction.

Mr. Hallwood is merchandising his plant through independent distributors. A model of the system was on display at the recent national locker convention and exposition at Chicago.

The system is designed for banks of 108 lockers—18 tiers of six lockers each—but banks containing as many as 192 lockers (32 tiers) are practical, it is claimed.

Backbone of the Hallwood plant is a 12-inch U channel in the center of the locker oval. Here is located the operating mechanism as well as the refrigerating plates. The tiers of lockers are propelled around the oval by a 6-inch pitch chain which receives its power from a small motor varying in capacity from 2 to 5 hp., depending upon the size of the bank of lockers.

The drive chain is equipped with a simple screw adjustment for taking up slack and to allow for possible wear. This is located at the opposite end of the channel from the motor.

A unique feature of the system is the patented turn at each end of the oval track. Steel plates 3/16 of an inch thick are provided in the floor. By using only three casters on each tier of lockers, two in front and one in back, a pivot motion is made possible. A sliding steel arm extends out from the chain. This arm is grooved to allow a justifying movement at its locker terminal.

Thus each tier of lockers swings around a sharp corner with only a fraction of an inch clearance, with the justifying arm allowing varying distance from the chain drive. The arm furnishes the motivation while the guide rollers, operating in a semi-circular track, hold the unit in proper position. This is claimed to be a new engineering solution to the U-turn problem.

Trackage and rolling devices occupy slightly more than 7 inches of space beneath the level of the building floor. Bond oilless graphited bronze bearings are used throughout, and the wheels operate from suspended Bond casters. Wheels base on 12-pound steel rails which are mounted by stationary clips on steel ties spaced 3 feet apart. Permanent alignment is secured by fastening the ties to the guide wheel cup-channel and the cup-channel to the ties.

Lockers in the Hallwood system are wider, shallower, and lower than in the ordinary plant. Each locker measures 36 inches wide, 24 inches deep, and 12 inches high, and has a capacity of about 6 cu. ft. Base of the top locker is only 60 inches from floor level. Two lower lockers in each tier are of the drawer type.

The patron in the Hallwood plant brings his locker into position behind the locker room door by merely pushing a numbered button corresponding to the number of the tier in which his locker is located. When this tier swings into position a rubber flap gasket seals the space between the door and the locker, thus preventing the passage of air either in or out of the locker room.

Pushing any of the control buttons turns on a red light on the control panel to indicate that the lockers are moving. When the proper unit is in place behind the door a tripper, one of which is on the back of each tier of lockers, touches a Micro limit switch.

This sensitive instrument, which is hermetically sealed to keep cold from the electrical points, turns off the signal light and stops the motivating mechanism. It is equipped with relay and is connected in insulated conduit.

Only 30 seconds is required for any locker tier to move into place behind the door. On longer banks a unique reversing control is utilized so that the desired unit moves directly toward the door, eliminating the time used in making the full circuit. All relays and controls are mounted outside the locker room.

Suggested layout for a typical Hallwood plant provides for a chill and ageing room to be kept at a constant temperature of 36° F., a quick-freeze room equipped to produce a room temperature of —20° F. and having plates for contact freezing at —40° F., and a non-refrigerated processing room.

In larger plant plans, a modern food or meat market is located in the area in front of the locker room doors. Sales and display space is provided. Any number of banks, each containing as many as 192 lockers, may be installed.

One of the big advantages claimed for the Hallwood system is the economies effected in operation of refrigeration equipment. Inasmuch as the tiers of lockers stand only 75 inches high and no wide aisles are needed for patrons to move about in, the ceiling of the locker room can be much lower than in the average plant, and the locker room itself can be much smaller.

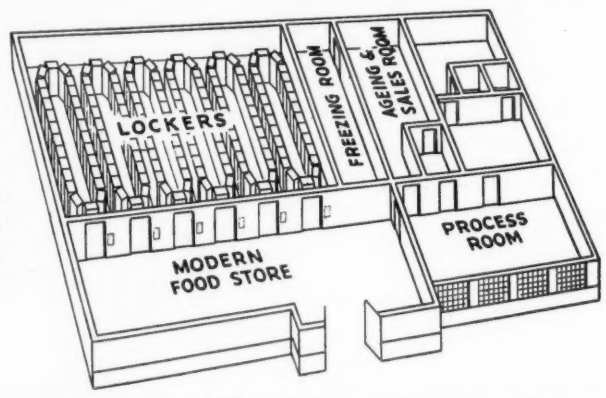
It is estimated that the Hallwood system makes possible a 30% reduction in the amount of refrigerated space required. This reduction results in both construction and operating economies which are claimed to more than offset the added expense of the mechanical equipment.

Another factor tending to reduce refrigeration requirements is the fact that patrons and attendants never enter the locker room, so no allowance for body heat is necessary. Nor is any allowance needed for heat leakage into the outer rooms, inasmuch as the opening around the locker room door is automatically sealed by the locker tier being used.

The Locker Comes To the Patron

Here is an artist's sketch of a Hallwood locker plant patron making use of the plant's serve-self facilities. By pushing the proper button on the control panel at the right, she has moved her locker into position behind the locker room door.

Layout



This diagram of a typical large-scale Hallwood locker plant installation shows the unique way in which the chain-driven tiers of lockers are arranged.

Tri-State Locker Men To Meet Dec. 9-10 At Sioux City, Iowa

SIOUX CITY, Iowa—"Make More Money" is the inviting theme of the fourth annual convention of the Tri-State Refrigerated Locker Association which is scheduled to be held Dec. 9 and 10 at Hotel Martin here.

And locker plant owners and operators from all over the country—approximately 3,000 of them—are being invited to attend this meeting so that they may hear the "nationally known" speakers, sit in on a round table discussion by operators who have had three to five years' experience in the business, and see the exhibits of more than 30 manufacturers of locker plant equipment and supplies.

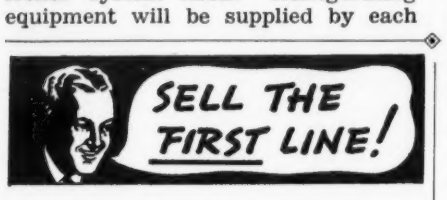
Convention-goers also will have an opportunity to meet "Frosty Food," billed as the "world's newest radio character," who is featured in the Tri-State association's new radio advertising campaign.

Entertainment features on the program include a free theatrical performance of the melodrama type entitled "Murder In the Old Red Barn." This will be followed by a buffet lunch. There will also be a demonstration of equine intelligence by "Silver Flash" of the White Horse Patrol, songs by the Shrine Quartet, and entertainment by radio talent from station WNAX.

The convention's "Make More Money" theme will be applied to all phases of the locker business, from the patron's viewpoint as well as from the operator's. Importance of locker plants in the rapidly expanding plans for national defense also will be stressed.

There will be no registration fee at the convention, and there will be no charge for the entertainment.

Sioux City is being plugged in the convention promotion as the "hub of one-third of the locker plants in the world." It is claimed that the area within a day's drive of this city, which is approximately the territory covered by the Tri-State Association, contains one-third of the world's frozen food locker establishments.



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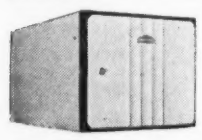

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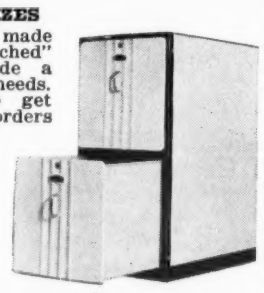

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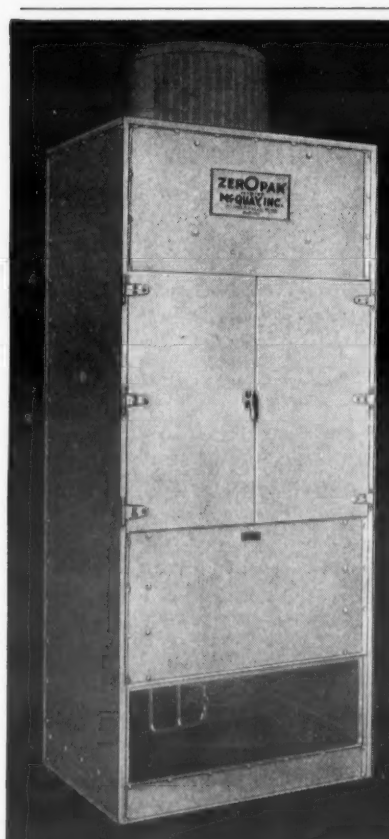

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Here's a new merchandising angle for Locker Operators—Start those "undecided prospects" small, and educate them to the larger sizes. Every Locker Plant should have a bank or two of them because it not only enables them to increase their patronage and revenue but they can build a more loyal and enthusiastic user.

Write For Complete Details

Get the facts about this new SAF-T-LOC Food Storage Locker—Shown for the first time at the Chicago Show, where it was received with acclaim by Locker Plant Owners as one of the newest and biggest forward steps in the industry. Be the first in your town to offer this new service. Shipped knock-down—quickly and easily assembled.

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Basic Locker Plant Requirements Are Outlined At California Conference

Los Angeles Engineer Offers Advice on Room Sizes, Temperatures, & Construction Details

BERKELEY, Calif. — Some generalized recommendations as to "how to build a locker plant" were outlined by H. G. Kirkwood, formerly of Frigidaire and now with Refrigeration Engineering, Inc., Los Angeles, when he presented a paper on locker plant design and construction before the Refrigerated Locker Industries Conference sponsored by the University of California here.

"A 'complete service' plant," Mr. Kirkwood declared, "should consist of at least four rooms, three of which should be refrigerated. This does not include rest rooms, offices, and similar facilities which are common to all modern businesses and buildings.

"Considering these rooms in the order of their use, the first is the chill room, where freshly slaughtered meat is hung. This room should be maintained at a temperature of 36° F., with 80 to 85% relative humidity to prevent shrinkage.

STORAGE PLUS DISPLAY

"This room should be designed not only as a storage room but also as a display and sales room, for it is here that animal carcasses are kept for sale to locker patrons. Cleanliness and good lighting are therefore important.

"Floor area of the chill room should be no smaller than one-fourth, and need be no greater than one-half, the floor area of the locker room. Ceiling height need not be greater than 8 feet when forced air cooling coils are used, but should be from 9 to 12 feet where pipe coils are used.

"Insulation should not be less than 4 inches and need be no more than 6 inches thick. Cost of insulation as well as operating cost naturally will be reduced by having one or more of the walls adjacent the locker or freezer room wall. Best floor is made from 4-inch corkboard with 3 or 4-inch concrete topping.

PROCESSING ROOM

"Second room is the processing or cutting room, and it need not be refrigerated. This room should be fitted with all the equipment necessary for the proper cutting, packing, and marking of meats, vegetables, and fruits. It is usually one-fourth the size of the locker room, with a ceiling height the same as the chill room. Insulation is not needed here except in walls common to cold storage rooms or in the ceiling if the roof is subjected to the effects of the sun.

"Third room is the sharp freezer room, and is the very heart of the locker system. It is here that the meat or other produce, after being properly prepared and packaged, is sharp frozen. This room must be held at —20° F. or lower.

"The quick freeze room is probably the smallest room in the plant, and is usually installed inside the locker room with doors opening through the wall into the processing room as well as directly into the locker room. One method of satisfying these requirements is that of a 350-locker plant which uses a 60-cu. ft. reach-in refrigerator with doors on front and back. This refrigerator is installed in the locker room with its side flush with the processing room wall.

"This quick freeze room or reach-in refrigerator need not be larger than is necessary to house the freezing coil and one-third of a square foot of shelf area for each locker installed. When installed in the locker room it need not have more than 3 inches of insulation. Even at this low temperature humidity is important, and forced air coils should work on a temperature difference (between the box and coil) no greater than 10°. Maximum difference with gravity flow coils should be not greater than 15°.

"Fourth and last room is the locker room itself, where the food is kept after being sharp frozen. Uniform temperature of 0° F. should be maintained in this room at all times. Some products, crab meat for example, can be ruined by even sub-zero fluctuations in temperature. The locker room should have from 8 to 12 inches of insulation.

"All steel lockers are recommended. These are usually arranged in tiers which are five lockers high, which would call for a ceiling height of approximately 10½ feet. A small ante or entrance room is desirable, as this helps to minimize the loss of cold air through opening of the locker room door.

30-INCH AISLES

"Aisles in the locker room should be at least 30 inches wide. A 6-inch space should be allowed between the lockers and the wall unless forced air cooling coils are used, in which case 1 inch is sufficient.

"Size of a locker plant will, of course, depend upon the location, the population of the area it will serve, and whether it is to be operated independently or as a subsidiary to another business. A locker plant having less than 300 lockers usually does not show much of a profit unless it is operated in conjunction with another enterprise.

"Cost of a locker plant is approximately $25 per locker installed in cases where land and building are not considered, or $35 per locker installed if land and building must be included in the cost. These prices are only approximate.

"The plant should be engineered by a competent company or person so that the savings made possible through proper design may be realized. Many firms extend this service whenever their products are used.

"In general a brick building is accepted to be the best, unless a new building is being built, in which case hollow concrete tile is the cheapest. A good roof and tight walls are essential, as moisture is an enemy of insulation. Underground construction requires less insulation, but presents a moisture hazard.

VENTILATION AS INSULATION

"Sufficient ventilation should be allowed between the refrigerated rooms and the roof above, and advantage should be taken of any shaded walls, thus offsetting the greater part of heat from the direct rays of the sun.

"Careful consideration should be given the floors. A floor laid on damp ground would, when frozen, expand and break up. Twelve to 18 inches of gravel or cinders should be under the floors of all rooms that are held below the freezing point of water.

"Remember that insulation is cheaper than refrigerating equipment. Use good insulation and plenty of it. When using insulation equal to cork, the following thicknesses are considered good practice: 4 to 6 inches for temperatures above freezing; 8 to 10 inches for temperatures below freezing.

"As to mechanical equipment, no compressor operating on a sub-zero load should be without an oil trap return. The advantages more than offset the added expense. A safe refrigerant must be used to obviate damage to persons or property in event of a mechanical breakdown.

"Consistent temperature is one of the most vital parts of a properly refrigerated locker plant. By all means every plant should have an approved means of rapidly removing the frost from the refrigeration coils in 5 or 6 minutes' time.

"When 1 inch of frost collects on a coil it is equal to 1½ inches of concrete in comparative insulation effect, so defrosting is a necessary evil."

Looking For Prospects?

MADISON, Wis.—Salesmen attempting to sell locker plants or the equipment for these plants many times have probably hesitated to approach certain types of business men on this subject, because of the very dissimilar nature of their business.

Results of a survey made in Wisconsin show that these fears are apparently groundless, for the rise of the locker storage industry has made many strange bedfellows.

It seems logical to assume that a locker plant might profitably be operated in conjunction with a meat market, a cheese factory, a creamery, or a cold storage plant, and the survey showed that many of them are. But there are also several Wisconsin businesses which apparently have little or nothing in common with the locker storage industry and yet have established locker plants as "sidelines."

Some of these out-of-the-ordinary combinations are indicated in the tabulation below:

Well, How About These? . . .

General Stores	6	Taverns	3
Ice Cream Plants	3	Harness Shop	1
Grocery Stores	3	Gas & Oil Station	1
Dairies	5	Poultry Business	1
Ice Plants	2	Plumbing & Heating	1
Restaurant	1	Janitor Supplies	1
Fish Markets	2	Produce Co.	1
Fuel Dealer	1	Farm Co-op	4
Super Market	1	Mink Farm	1
Department Store	1	Farm Elevator	1
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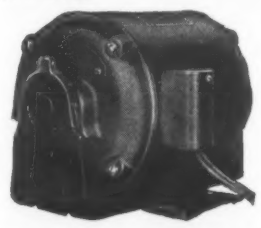

TYPE RA, REPULSION-START-INDUCTION motors are single-phase brush-lifting motors having high starting-torque and low starting-current. The ideal motor for heavy duty applications such as stokers, compressors, pumps, etc. Obtainable in various speeds, frequencies, and voltages; rigid or resilient mounted; 1/8 to 15 hp.

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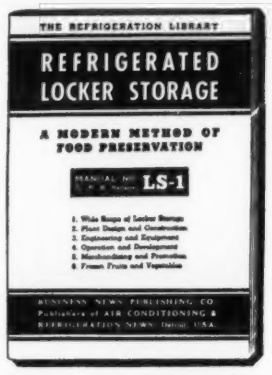
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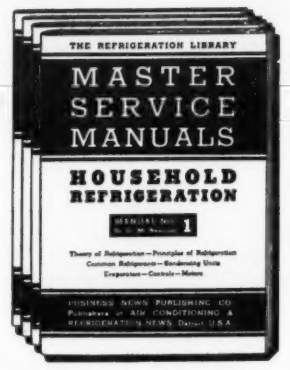

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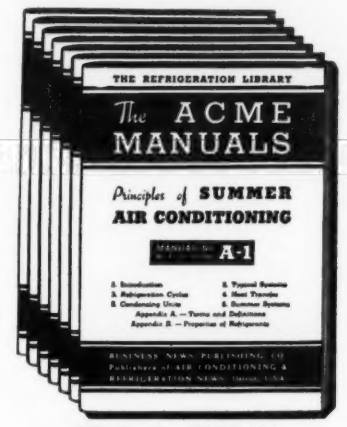
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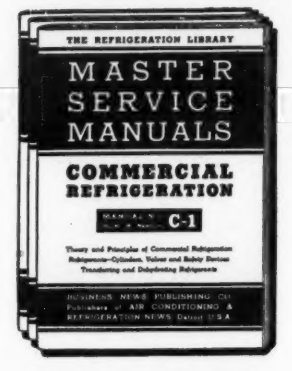

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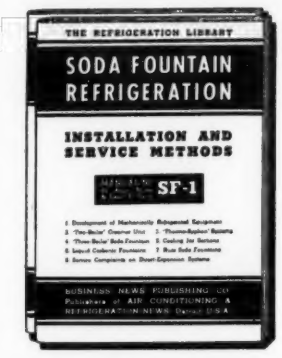
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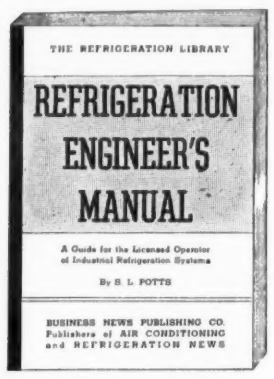
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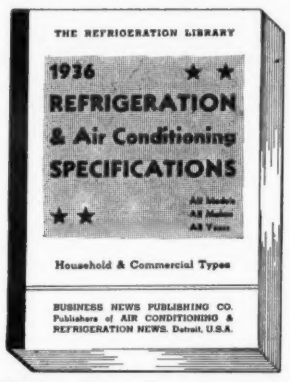
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Grand Rapids—B. F. Harris & Son
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MINNESOTA
Minneapolis—Refrigeration & Industrial Supply Co.
St. Paul—Thermal Co., Inc.

MISSOURI
Kansas City—Forslund Pump & Machinery Co.
Kansas City—Refrigeration Equipment Co.
St. Louis—Harry Alter Co.
St. Louis—Brass & Copper Sales Co.
St. Louis—R. E. Thompson Co.

NEBRASKA
Lincoln—Ruegg Refrigeration Supply Co.
Omaha—H. C. Noll Co.
Omaha—Ruegg Refrigeration Supply Co.

NEW JERSEY
Atlantic City—Atlantic City Auto Supply Co.
Newark—Harry Alter Co.
Newark—T. W. Binder Co.
Newark—Melchior, Armstrong, Dessau Co.
Paterson—White & Shanger, Inc.
Ridgefield—Melchior, Armstrong, Dessau Co.
Trenton—Radio Hospital

NEW YORK
Albany—Melchior, Armstrong, Dessau Co.
Bay Shore, L. I.—Sid Harvey, Inc.
Bronx—Aetna Supply Co.
Bronx—Harry Alter Co.
Bronx—Melchior, Armstrong, Dessau Co.
Brooklyn—Harry Alter Co.
Brooklyn—Capson Co.
Brooklyn—Melchior, Armstrong, Dessau Co.
Buffalo—Melchior, Armstrong, Dessau Co.
Buffalo—Root Neal & Co.
Hempstead, L. I.—Sid Harvey, Inc.
Jamaica, L. I.—Harry Alter Co.
Jamaica, L. I.—Sid Harvey, Inc.
Mt. Vernon—County Seat Plumbing Supply Co., Inc.
New York—Harry Alter Co.
New York—Melchior, Armstrong, Dessau Co.
Poughkeepsie—Poughkeepsie Plumbing Supply Co., Inc.
Rochester—Melchior, Armstrong, Dessau Co.
Rochester—Pfaudlers Refrigeration Parts, Inc.
Syracuse—Central Service Supply Co.
Utica—Vaeth Electric Co.
Valley Stream, L. I.—Sid Harvey, Inc.

NORTH CAROLINA
Charlotte—Henry V. Dick Co.
Raleigh—Henry V. Dick Co.

OHIO
Cleveland—Harry Alter Co.
Cleveland—K. L. Debes & Co.
Cleveland—Williams & Co., Inc.
Cincinnati—Radio Supply Co.
Cincinnati—Williams & Co., Inc.
Columbus—Pixley Electric Supply Co.
Columbus—Refrigeration Electric Supply Co.
Columbus—Williams & Co., Inc.
Dayton—Allied Refrigeration Parts, Inc.
Toledo—Supplies, Inc.

OKLAHOMA
Oklahoma City—Macklanburg Brass & Copper Products, Inc.
Oklahoma City—Mideke Supply Co.
Tulsa—K & M Supply Co.

OREGON
Portland—Refrigerating & Power Specialties Co.
Portland—Refrigerative Supply, Inc.

PENNSYLVANIA
Allentown—Larson Supply Co.
Harrisburg—Melchior, Armstrong, Dessau Co.
Harrisburg—Refrigeration Supply Co., Inc.
Philadelphia—M & E Refrigeration Accessories Co.
Philadelphia—Melchior, Armstrong, Dessau Co.
Philadelphia—Victor Sales & Supply Co.
Pittsburgh—Melchior, Armstrong, Dessau Co.
Pittsburgh—Wm. M. Orr Co.
Pittsburgh—Williams & Co., Inc.
Reading—Larson Supply Co.
Scranton—Central Service Supply Co.
Wilkes-Barre—Radio Service Co.

SOUTH CAROLINA
Columbia—Henry V. Dick Co.

TENNESSEE
Chattanooga—Pegler Machinery Co.
Knoxville—Leinart Engineering Co.
Nashville—Electra Distributing Co.

TEXAS
Beaumont—Standard Brass & Mfg. Co.
Dallas—Beckett Electric Co.
Dallas—Refrigeration Supply Co.
Ft. Worth—L-S Supply Co.
Houston—D. C. Lingo Co.
San Antonio—United Refrigeration Co.
San Antonio—Westbrook Carburetor Electrical Co.

UTAH
Salt Lake City—Refrigerating & Power Specialties Co.

VIRGINIA
Richmond—Melchior, Armstrong, Dessau Co.
Richmond—Refrigeration Supply Co.

WASHINGTON
Seattle—Refrigerating & Power Specialties Co.
Seattle—Refrigerative Supply, Inc.

WEST VIRGINIA
Charleston—Air Conditioning & Refrigeration Supplies, Inc.

WISCONSIN
Milwaukee—Gustave A. Larson Co.
Milwaukee—Refrigeration Specialties Co.
Milwaukee—Thermal Co., Inc.
Madison Gustave A. Larson Co.
Oshkosh—Gustave A. Larson Co.

CANADA
Vancouver, B. C.—Fleck Bros., Ltd.
Winnipeg, Man.—Winnipeg Refrigerator Parts, Ltd.
East London, Ont.—Refrigeration Supplies Co., Ltd.
Montreal, Que.—Airco Refrigeration Parts
W. Montreal, Que.—Railway & Engineering Specialties, Ltd.

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BUSINESS NEWS PUBLISHING CO., 5229 Cass Ave., Detroit, Mich.

One-Man 'Follow-Up Staff' Aids Sales

All Departments Are Prospect-Finders in Barker Plan; Furniture Men and Decorators Are 'Bird Dogs'

LOS ANGELES—By making its furniture salesmen and decorators double as refrigerator salesmen and abolishing outside follow-up calls by regular appliance salesmen, Barker Bros. furniture store here has sent refrigerator sales up while selling costs stayed the same.

Since the plan was adopted, 28% of refrigerator sales came from outside the refrigerator department. When furniture salesmen or decorators sell a bill of goods in their lines, they go to bat on a refrigerator sale. As soon as the customer is sounded out on the possibility of a new refrigerator and brought beyond the "suspect" stage, these salesmen bring the customer to the refrigerator department for the finishing sales touches.

The furniture salesmen and decorators who line up the prospects receive a commission when the refrigerator is sold. The "closer" from the refrigerator department also collects his share of the credit and cash. The total of the two commissions is about the same as the commission paid on a sale originating in the refrigerator department.

To keep salesmen outside the refrigerator department gunning for refrigerator sales, contests are held among these salesmen with cash prizes going to the individuals or groups totaling the most sales. In a recent five weeks' contest, 78 refrigerators were sold by salesmen outside the refrigerator department.

Second important feature of the store's sales plan is the abolishing of outside follow-up calls by regular refrigerator salesmen, and turning over all outside work to one man.

V. T. PENDER
His inside-outside cooperative sales plan has boosted Barker's business.

The outside salesman works on salary, commission, and car expense. In this way, the prospect is interviewed while still interested, and is not left waiting for three or four days until a salesman's turn for outside calls comes around. This "waiting period" lost many sales, the store found, when the department operated on the "days in, days out" basis.

A check-up after seven months of operation showed the plan to be a real money saver. Earnings of all the inside salesmen are said to be increased. With one man detailed for outside work, they have no car expense, and waste no time trying to interview prospects at home. As a result they can do a better job of selling the prospects in the store.

When a deal originating in the appliance department is closed by the outside man, the inside man gets full commission on the sale. This makes it important for the inside man to give the outside man live prospects. Telephone prospects are also turned over to the outside man, who often completes the sale immediately, it is said.

V. T. Pender, buyer for the appliance department, believes that having salesmen on the floor half the time and out half the time is only 50% efficient, pointing out that the average salesman won't spend his time and gasoline unless the sale is practically assured. Under the store's new sales system cooperation between outside man and inside staff is assured, with efficiency, sales, and commissions all on the rise.

'Xmas Angle' Wakes Up 'Sleepy' Prospects

MEMPHIS, Tenn.—The problem of bringing major appliances more solidly into the Christmas gift picture has been solved by the retail department of Lyle-Crenshaw, Norge distributor here, through the novel use of a "dormant prospect" file.

This file, brought up to date each month by the company's six outside salesmen, is a listing by means of record cards of all customer-prospects the salesmen believe are bona fide future buyers, but who for some reason or other would not make a purchase when originally contacted.

Two or three of these are developed by each man each week. Instead of being fruitlessly followed up during the next few months, they are placed in the "dormant prospect" file until the holiday season.

"Our experience has shown that ofttimes the prospect who needs and wants a new refrigerator, but who thinks he cannot afford it during the season, will let Christmas gift necessity give him the extra push needed to close the sale," it was pointed out. "Frequently, once we have planted the idea, the prospect willingly takes us up on it, and begins to save toward a purchase at Christmas time."

Around 120 dormant prospects usually have been accumulated by Dec. 1, when salesmen begin to work on the Christmas promotion. At this time, when appointments and general leads are scarce, the "Christmas angle" has been a distinct boon to business.

The prospect who has shown interest in a holiday purchase is telephoned, reminded of the Christmas idea, and an appointment made to show him the line and discuss payments. If the prospect gave no indication of holiday buying desires, the approach is handled differently—playing up the value of the refrigerator or range as a family holiday gift, and planting the thought of "killing two birds with one stone" in the prospect's mind.

Of the 120 prospects contacted in the 1939 Christmas promotion, 80 were sold an appliance of some sort—making December the best winter month in Lyle-Crenshaw's experience. Major appliances sold as gifts were delivered on Christmas eve, wrapped in cellophane, with a brilliant red satin bow.

Every Clarage Fan Wheel is BOTH statically and dynamically balanced—every precaution taken to insure freedom from vibration and QUIET operation. That's one BIG reason why so many manufacturers prefer Clarage Wheels and Complete Assemblies. And, yes, we build a complete range of sizes! *May we have your next inquiry?*

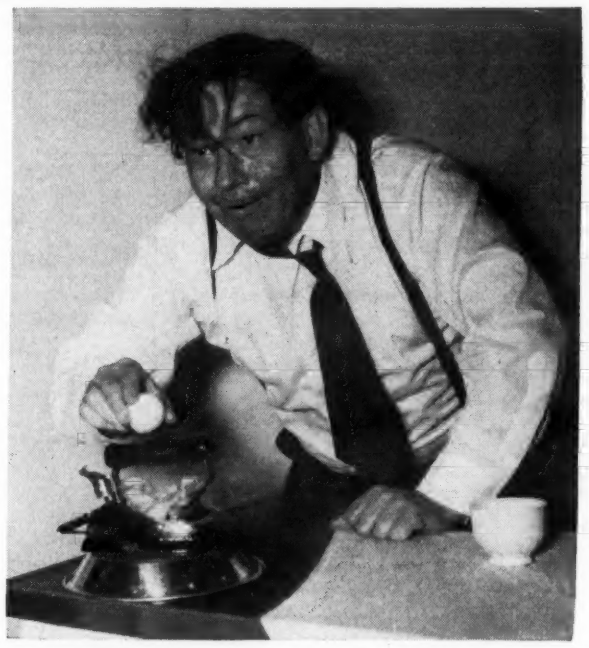
CLARAGE FAN COMPANY
KALAMAZOO, MICHIGAN
Sales Offices in All Principal Cities

Evers WATER COOLING REFRIGERATOR

Renders Real Service. Supplies 2 to 4 gal. cold water hourly and twice as efficiently as ordinary refrigerators. Also cares for ice cubes, frozen foods.

EVERS HARDWARE CO.
Denton, Texas

Sam's Selling Slants



V. E. ("Sam") Vining, merchandising manager for Proctor Electric Co., is the industry's most colorful salesman. This is the twenty-first of a series of Sam's famous 'Selling Slants" messages to salesmen. An earlier series was published in the News in 1937.

CLEVERNESS

I called on an architect in Detroit to sell him an oil burner for his own home.

I found a bewildered man. He had listened to so many sales talks—so many claims and counterclaims, that he was about disgusted with the whole idea of burning oil.

In exasperation, he said to me, "How in the world can a man separate the chaff from the wheat? On what basis should a man make a decision as to which burner to buy?"

"I'll tell you how," said I. "Just put your name right here, and when the rest of them come around tell 'em it is all settled."

I shoved an order blank in front of him, put my fountain pen in his hand, and—

He signed it.

You know without my telling you what I did when I got out of his office. What!—me canvass any more that day—with an eleven hundred dollar order in my pocket—a high grade, high pressure salesman like me—?

Not on your life. I had to go back to the office, find the gang, and tell 'em "What he said" and then "What I said"—then "What he said" and how I, cleverly, did thus and so.

As I walked into the office my fame had evidently preceded me because the office girl said, "Did you sell a burner to John Architect?"

"Did I," said I, "Ask me—and how."

"He just called up and canceled," said she.

And I never did get the order back—or any business from his office.

I had forgotten the big selling idea that cleverness will never take the place of real selling.

An item must be sold whether before, or after you get the order.

If a prospect acts like this . . .

TELL HER ABOUT DULUX !
REG. U.S. PAT. OFF.

YOU KNOW THE KIND . . . carefully checking every detail herself, inspecting every square inch with a scrutiny that would do credit to Sherlock himself.

And here's a tip that may make your sale easier: Point out to your prospect the sleek, beautiful finish of Du Pont DULUX. Explain how DULUX *keeps* its brilliant snowy whiteness; how DULUX is resistant to grease, oils, food stains and accidental bumps. Tell her—better yet, *demonstrate* with a damp cloth—how easy DULUX is to clean, which means less work for her.

Point out the DULUX seal. Tell her that the famous Du Pont reputation for highest quality stands squarely behind it—to assure her that she's getting full value for her money. This "extra" in your sales talk really works—for many's the salesman who has used it to clinch sales *faster*. E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Delaware.

Tune in "Cavalcade of America" . . . N B C Red Network . . . every Wednesday evening

DU PONT
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FINISH
ON EXTERIOR

National Lock Co.,
Rockford, Illinois
•
Manufacturers of
Commercial and Domestic
REFRIGERATOR
HARDWARE

BUNDY TUBING
DETROIT

Dayton
V-BELTS
Silent, vibrationless, dependable, long-lasting. Powerful grip prevents slippage. A nearby distributor carries a complete stock for appliances and machines.
THE DAYTON RUBBER MFG. CO., DAYTON, OHIO
World's Largest Manufacturer of V-Belts

Use CHICAGO SEALS
for seal replacements
A complete line in all sizes
CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

Commercial Unit Sales May Zoom Near 600,000 Mark In '41

* * *

What is the market now for commercial refrigeration equipment?

That's a question often asked, pretty difficult to answer. On these two pages the NEWS will attempt to present a rough idea of the market.

The information is based upon what figures or estimates are available of past performance in the various divisions of the market, with consideration given to trends toward increases or decreases both in the particular product, and in general business conditions.

Commercial Refrigeration Condensing Units

Sales of commercial refrigeration machines (condensing units) this year should reach the half-million mark in unit sales.

With sales gains continuing to be shown in the fall months and the prospect for improved business conditions on the horizon in 1941, a 20% increase in sales of condensing units for commercial purposes may be forecast, which would mean that 600,000 such machines are likely to be sold in 1941.

Equipment in this classification includes condensing units ranging in size from ⅛ to 200 hp. and used for a wide variety of applications, chief among which are display and storage refrigerators in meat markets and grocery stores; restaurant and bar fixtures; institutions (hospitals, schools, etc.); ice cream cabinets and soda fountains, and counter-type ice cream freezers; beverage coolers, both bottle and draft; frozen food cabinets; refrigerated locker storage plants. There is a myriad of other applications such as fur storage, photographic developing,—applications which in themselves do not represent a great volume of business, but which are important because of the increasing number of new applications turned up each year.

Air conditioning, of course, represents a market for condensing units that must be considered in itself. The volume in this field is included in the above estimates for 1940 and 1941, and while the growth of this market hasn't been as fast as had been predicted, the growing emphasis on "packaged" (self-contained) equipment and specialty merchandising methods has helped the market for condensing units.

The following is a five-year record of condensing unit yearly sales totals, based upon available figures and an estimate for next year:

1936	250,000
1937	390,000
1938	335,000
1939	390,000
1940	500,000
1941	600,000?

Refrigerated Display Cases Reach-In Refrigerators And Market Coolers

A good share of the market for this equipment is in the replacement or "renovation" classification, but many members of the industry are inclined to think that most of the sales gains in recent years have come from sales to new stores, or to stores that have previously not used such equipment.

In other words, the market has "spread" to the smaller groceries (who may install a cold meat line), to delicatessens, to "basement" stores, and the like, and thus is not merely a matter of replacing worn-out or outmoded equipment.

By far the largest share of refrigerated display cases sold are used to display meats. Dairy cases which show milk, cheese, butter, etc. have been a growing factor. Refrigerated vegetable display cases have jumped into the picture with a bang in the past three years, and are an important item. Mechanically refrigerated fish cases and candy display cases have not as yet been sold in volume, but both display promise.

Assuming that the sale of display cases will increase 10 to 20% in 1940 over 1939 (which seems likely under present indications), and that a like increase will be forthcoming next year, the market is likely to be

1941 display case sales ..35,000

"Reach-in" refrigerators are upright cabinets with doors leading into various compartments and are generally used to provide storage for dairy products, packaged items, and some bottled goods. Market coolers are large enough for a man to walk into, and keep the larger cuts of meat. The baker's "dough retarder" refrigerator in which sales have sprouted considerably in the past two or three years is in this classification.

1941 probable sales 15,000

Bottled Beverage Coolers Beverage & Food Coolers

More than 12 times as many bottled beverage coolers will be sold in 1940 as were sold in 1933, indicating the tremendous acceptance of this product in the last seven years.

Comprising both dry and wet refrigeration systems, and in some cases using forced-draft cooling, this product has seen many design improvements in the past seven years.

It is difficult to name a commercial establishment that isn't a prospect for this kind of equipment. Roadside lunchrooms and gasoline filling stations have represented a pretty fair segment of the market; amusement parlors and grocery stores have also figured in the big sales gain in this field.

Present indications are that bottled beverage cooler sales for 1940 will show an increase of from 25 to 35% over 1939. Even if sales level is off next year, a guess at the market would be

1941 sales 80,000

Ice Cream Cabinets

This veteran among commercial refrigeration applications continues to hold its own. Although it slumped badly with other types of commercial equipment in 1932 and 1933, for the past four years it has held fairly steady at a high level of sales.

Since sales this year will probably show a slight increase over 1939, and with certain design improvements having been offered, it is probable that 1941 sales will attain the 1939-1940 level, so

1941 cabinet sales 40,000

Refrigerated Vending Machines

Sale of mechanically refrigerated coin operated units for automatic dispensing of bottled beverages, ice cream bars, beverage by the cup, etc., is still in its infancy.

The market falls into two general classes, and there is some difference in the type of product that is made for each of the two classes. One type of vendor is found in theaters, filling stations, cigar stands, bus and train depots, amusement parlors, etc., while the other is aimed for installation in industrial plants, to give the worker his favorite beverage during lunch or "time-off" periods.

With very little past performance to go on, a wild guess would put the 1941 market at

1941 vendor sales 5,000

Frozen Food Cabinets

With the continued advance of the retail quick-frozen foods industry, low temperature cabinets to store these food products have represented one of the fastest-growing applications of commercial refrigeration equipment.

A majority of the cabinets continue to be the blind storage type, although the tendency to display cabinets is on the upgrade.

Birds Eye Frosted Foods, which accounts for perhaps half of the nation's volume in frozen foods, has announced that it is planning to add 5,000 dealers next year, possibly more. On this basis it would seem likely that the volume for next year would be

1941 cabinet sales 12,000

Counter Ice Cream Freezers

Units operating to freeze and in some cases to harden ice cream in small batches on the retailer's premises.

This business has had a slow but steady growth, and is well past the "novelty" stage. In the last few years the development of a small, self-contained freezer without the hardening cabinet has widened the market for such places that wish to serve frozen malteds or "soft" ice cream.

Market is comprised chiefly of confectioneries, drug stores, roadside stands, and department stores, although almost any type of place which attracts the public in any numbers might be considered a prospect.

It is difficult to estimate how many of these might be sold in 1941. With what is known of past sales performance, however, one estimate might be

1941 counter freezers 4,000

Bottle Water Coolers Pressure Water Coolers

With a tremendous potential market, sales of drinking water coolers continue at a moderate pace probably because prospects regard them as a "luxury" item, despite efforts of manufacturers to stress the "healthful" note of drinking a lot of water.

Sales of this item took a good

(Concluded on Page 43, Column 1)

ONLY Sherer HAS THE VEGETAIRE!
The VEGETAIRE pays its way by increasing produce sales . . . eliminating spoilage and shrinkage. Will pay YOUR way by showing a profit on every sale . . . by increasing compressor volume.
Write for catalog and franchise details.
SHERER-GILLETT CO., MARSHALL, MICHIGAN

ESTABLISHED 1898
★ ★ WEBER SODA FOUNTAINS ★ ★
There's A Longer Profit In WEBER Equipment!
A line of fountains making real money for aggressive distributors. Nineteen models. All priced exceptionally low. Weber fountain distributorships available. Write today for complete information. Cash in on America's fastest selling line.
GREATEST LINE IN AMERICA
Distributorships also available for refrigerator display cases and reach-in cabinets.
WEBER SHOWCASE AND FIXTURE COMPANY, INC.
5700 AVALON BOULEVARD., LOS ANGELES, CALIFORNIA

THE DAIRY CASE THAT TOPS THEM ALL
"EYE LEVEL" DISPLAY BOOSTS SALES. PERFECT REFRIGERATION ENDS SPOILAGE.
ALSO AVAILABLE WITH NON-REFRIGERATED OPEN BOTTOM, WITH WIRE BASKETS.
IDEAL FOR DAIRY, PRODUCE, AND ALL OTHER PERISHABLES.
A BIG DEMAND FOR THIS ITEM. A REAL PROFIT FOR YOU IN EVERY SALE.
INQUIRE TODAY!
MODEL 6000
FOGEL REFRIGERATOR COMPANY 16th & Vine Sts., Phila., Pa. Since 1899

We'll meet you in CHICAGO
At the STEVENS HOTEL
Jan. 13-16, 1941
Ranco headquarters will be at Booths No. 142 and 143—at the big All-Industry Refrigeration and Air Conditioning Exhibition.
Don't forget to drop in to see us. Anyone on the floor can tell you where the "Ranco crew" is holding forth!
A real welcome awaits you and your friends at Ranco headquarters—where "good fellows get together".
Ranco INC.
COLUMBUS, OHIO

Commercial Condensing Units
All New Air Cooled Condensing Units Complete with Nationally known compressor, Delco motors, controls, etc. ⅓ H.P.—$46.00, ½ H.P.—$78.00, ¾ H.P.—$90.00, 1 H.P.—$110.00.
All New Water Cooled Condensing Units Complete with Nationally known compressor, Delco motor, H & L Pressure control and Water Valve. ½ H.P.—$86.00, ¾ H.P.—$100.00, 1 H.P.—$120.00.
Wagner motors optional.
We guarantee complete satisfaction or your money back.
Refrigeration Supply Jobbers
2521 N. PULASKI ROAD
CHICAGO, ILLINOIS.

MUELLER BRASS CO.
"Little Giant" Purger
See it at Booths 120 & 121
Refrigeration and Air Conditioning Exhibition
Stevens Hotel, Chicago
Jan. 13-16, 1941

LET US SOLVE YOUR
COIL PROBLEMS
MARLO COIL COMPANY
SAINT LOUIS, MISSOURI

Hardy-MAYFLOWER
commercial compressors
are Efficient, Sturdy and Reliable
Hardy Manufacturing Co., Inc.
126 Davis Ave., Dayton, Ohio.

STOP SHAFT LEAKS
ROTARY SAFETY FIRST
TRADE MARK
TOPS
In Replacement
Seal Units
ROTARY SEAL
Rotary Seal Co., Chicago, Ill.

Dealers Wanted for Midwestern and Southern States
CAMPBELL REFRIGERATOR CO.
Milwaukee, Wis.

GALE COMPRESSORS
Single and twin cylinder units. Engineered and manufactured to highest standards. Write
GALE PRODUCTS
1635 Monmouth, Galesburg, Ill.

Filtrine
WATER COOLERS—FILTERS
to comply with
U. S. NAVY—ARMY Specifications
Filtrine Mfg. Co., Brooklyn, N.Y.

The Market

(Continued)

rise in 1939, although not approaching the high point reached in 1937. A slight increase is expected this year over the 1939 figure.

With almost every type of commercial establishment and public institution a potential user of this item, manufacturers do not lack for prospects. With increased industrial activity, an increase of some sort can be expected, so the forecast is

1941 water cooler sales ..32,000

Milk Coolers

Refrigerated "heavy duty" cabinet for cooling milk on the farm. Tendency is to make them self-contained, with condensing unit on the top. Some manufacturers adding a dry storage compartment for family food refrigeration.

Progressive, conscientious dairy farmers buy these coolers, but the biggest impetus to sales comes from state laws which require that milk be cooled at the point of production.

With very little to go on in the way of figures for past years, an estimate of the 1941 market can only a guess, but here it is:

1941 milk coolers 3,000

Air Conditioning

In considering the market for air conditioning in 1941 we are speaking of air conditioning equipment as it is thought of by the refrigeration and air conditioning industry, and we might add, by the general public. We are talking of the cooling phase of air conditioning, with the other phases being incidental, as far as the consideration of the market is concerned.

In the last couple of years air conditioning equipment has become more clearly classified, in terms of the type and size of equipment, rather than of the application.

Such a classification by size of equipment begins with the self-contained, portable room cooler. Most of these are the so-called "window coolers," thus described because they can be installed on the window sill. However, there are some floor cabinet types of self-contained room coolers which are portable.

Main application of these units is in small offices, or for single rooms in residences.

Next up the line come the self-contained "floor-type" room coolers, which are not portable. These often have a window connection to remove the heat from the condenser, and to permit the introduction of fresh air. In some a water-cooled condensing unit is employed.

With larger capacity than the portable units, the "floor-type" cooler may cool one large room or perhaps a group of smaller rooms.

Packaged "store coolers" represent the next classification. Acceptance of this type of unit has been rapid. Designed with compact, vertical lines, these units can be placed inconspicuously in stores, restaurants, and offices, and have sufficient capacity to do a first rate cooling job on a good-sized premises. In many cases auxiliary ductwork is run from such units to provide air distribution over a fairly wide floor area.

This is the product that has brought the idea of making air conditioning a "packaged" piece of merchandise, susceptible to specialty selling methods, close to a reality.

Packaged "central station" units, in which a complete air conditioner remotely installed treats the air which is then carried to distributing outlets through ducts is the classification that follows "store coolers." Since it is somewhat more difficult to find suitable applications for this larger "ready made" job than it is for store coolers, the market isn't as great.

Final classification, of course, is the classification which can be known as "air conditioning systems," and which are the "tailor made" jobs designed to fit a particular application—commercial, industrial, or residential. The size of such a job might range from 1 ton of refrigeration to 1,000 tons, but such installations are all of the same class.

With no means yet to set up for providing industry figures, it is difficult to estimate the market on the basis of past performance. From what is known, however, the following may be a fairly accurate guess at what the sales managers see the 1941 market to be

Portable room coolers	40,000
Floor room coolers	4,000
Packaged store coolers	25,000
Packaged central systems	2,500
Other central systems	15,000

Estimate 14,000 New Refrigerated Locker Storage Plants

Manufacturers of refrigerated locker plant equipment and supplies have a potential market of better than 14,000 new plants at which to shoot, if the calculations of Roger Sprague of Baker Ice Machine Co. are correct.

Mr. Sprague estimates that the future expansion of this business will probably mean the construction of approximately 14,469 new plants. This number, added to the 2,838 plants which his figures show were in operation as of July 1, 1940, would make a grand total of 17,307 plants.

Mr. Sprague explains that his estimates of the industry's expansion are based on an average plant size of 350 lockers, and will vary in direct proportion to any variance in this plant capacity.

Here are some conclusions drawn from the statistics which Mr. Sprague has compiled (see table):

New York State, which has by far the greatest population of any state in the Union but now ranks only twenty-eighth in number of locker plants, Mr. Sprague envisions as the greatest market of all. He predicts that someday this state's six locker plants will be increased to 1,288, making it the top ranking locker state in the nation.

On the basis of 350 lockers to a plant and one locker to a family, this means that about 1,713,040 people of the state's 13,379,622 population will eventually be enjoying the benefits of locker storage.

Iowa, present leader in the locker plant field although ranking only twentieth in population, will reach its point of locker saturation at 636 plants, as Mr. Sprague sees it. This will mean a total of 209 plants added to the 427 which his tabulations show the state credited with on July 1, and will mean that approximately 845,880 of the state's 2,525,430 inhabitants will be eating locker-stored food.

Besides New York and Pennsylvania, only three states—California, Texas, and Kentucky—are slated by Mr. Sprague to have a potential of more than 500 new plants.

Table Showing Locker Distribution by States

State	Population 1940 Census	No. of Locker Plants (see note)	No. of Lockers 75% Of Plant Capacity (see note)	Storage in Lbs. 75% Of Plant Capacity (see note)	Daily Freezing Capacity In Lbs. (see note)	Probable Number Plants. Future Expansion (see note)
1	2	3	4	5	6	7
New York	13,379,622	6	1,462	292,400	2,924	1,282
Pennsylvania	9,891,709	33	8,662	1,732,400	17,324	980
Illinois	7,874,155	174	45,675	9,135,000	91,350	436
Ohio	6,889,623	59	15,487	3,097,400	30,974	513
California	6,873,688	52	12,740	2,548,000	25,480	308
Texas	6,418,321	100	26,250	5,250,000	52,500	526
Michigan	5,245,012	59	15,487	3,097,400	30,974	382
Massachusetts	4,312,332	2	525	105,000	1,050	405
New Jersey	4,148,562	4	1,050	210,000	2,100	372
Missouri	3,775,737	45	11,812	2,362,400	23,624	397
N. Carolina	3,563,174	4	1,050	310,000	2,100	496
Indiana	3,416,152	59	15,487	3,097,400	30,974	491
Wisconsin	3,125,881	277	72,712	14,542,400	145,424	252
Georgia	3,119,953	11	2,887	577,400	5,774	468
Tennessee	2,910,992	27	7,087	1,417,400	14,174	422
Kentucky	2,839,927	3	787	147,400	1,474	507
Alabama	2,830,285	25	6,562	1,312,400	13,124	309
Minnesota	2,785,896	320	84,000	16,800,000	168,000	216
Virginia	2,664,847	3	787	147,400	1,474	487
Iowa	2,525,430	427	112,087	22,417,400	224,174	209
Louisiana	2,355,821	4	1,050	210,000	2,100	406
Oklahoma	2,329,808	80	21,000	420,000	4,200	431
Mississippi	2,181,763	20	5,250	1,050,000	10,500	402
Arkansas	1,948,268	15	3,937	787,400	7,874	381
S. Carolina	1,905,815	2	525	105,000	1,050	405
W. Virginia	1,900,217	1	242	48,400	484	306
Florida	1,877,791	4	1,050	210,000	2,100	493
Maryland	1,811,546	5	1,312	262,400	2,624	252
Kansas	1,799,137	133	34,912	6,982,400	69,824	219
Washington	1,721,376	385	101,062	20,212,400	202,124	103
Connecticut	1,710,112	1	242	48,400	484	210
Nebraska	1,313,468	174	45,675	9,135,000	91,350	224
Colorado	1,118,820	31	8,137	1,627,400	16,274	68
Maine	845,139	1	242	48,400	484	160
Rhode Island	711,669	...	...	...	...	80
District of Columbia	663,153	...	...	...	...	8
South Dakota	641,134	64	17,800	3,560,000	35,600	131
North Dakota	639,690	54	14,175	2,835,000	28,350	147
Montana	554,136	60	15,750	3,150,000	31,500	43
Utah	548,393	14	3,675	735,000	7,350	60
New Mexico	528,687	1	242	48,400	484	74
Idaho	523,440	76	19,750	3,950,000	39,500	119
Arizona	497,789	1	242	48,400	484	84
New Hampshire	489,716	...	...	...	...	92
Vermont	357,598	2	525	105,000	1,050	63
Delaware	264,603	...	...	...	...	10
Wyoming	246,763	19	4,987	997,400	9,974	26
Nevada	110,014	1	242	48,400	484	14
Totals	**131,409,881**	**2,838**	**743,620**	**45,124,000**	**148,904**	**14,469**

Column 3—Plants as of July 1, 1940.

Column 4—Based on average of 300 to 350 lockers per plant and one locker per family. Figures may be multiplied by 3.8 to obtain the number of people that capacities shown would serve.

Column 5—Based on average of 200 lbs. frozen foods per locker when filled one time. Figures may be multiplied by 2.25 to obtain yearly average plant handling capacity.

Column 6—Based freezing capacity at rate of 2 lbs. per installed locker.

Column 7—Based on average of 350 lockers per plant. Many plants have 500 and over installed lockers. Thus, the number of plants shown will vary as the average number of lockers per future plant increases. Number valuated by "family town" value.

Division of ownership:

Owned by: Creameries and dairies	23%
Cold storage warehouses	12%
Cooperatives	16%
Individuals (no other business)	15%
Established meat markets	17%
Miscellaneous not listed	17%

CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, $2.00, additional words, four cents each. Three consecutive insertions, $5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS AVAILABLE

WANTED Refrigeration Engineer by responsible manufacturer. Write full qualifications to Box 1275 care of this publication. All communications will be kept strictly confidential.

COMMERCIAL REFRIGERATION Sales Supervisor—Opportunity for man who can both sell and organize his own department, specializing in beer cooling, reach-in refrigerators, bottle coolers, ice cream cabinets, etc. The name of the manufacturer is one of the oldest and most respected names in the industry. The city is located on the Eastern Seaboard having a trading population of a million and a half. The distributor is twelve years old with a sound financial set up. Write stating complete details including sales volume and earnings for the past three years. Box 1277, Air Conditioning & Refrigeration News.

JUNIOR INSTRUCTOR for large school teaching Refrigeration and Air Conditioning. Must be University Graduate with B. S. Degree in electrical or mechanical engineering. Prefer single man with pleasing personality—good health and habits. Small salary to start, good opportunity. State Age, Training, Experience, how soon available. Include references in application. Box 1278, Air Conditioning & Refrigeration News.

POSITIONS WANTED

DISTRICT MANAGER for national manufacturer of radios and refrigerators covering Southeast, with headquarters in Atlanta contemplates change. Will consider factory connection appliances or allied line. Box 1274, Air Conditioning & Refrigeration News.

FRANCHISES AVAILABLE

SEND FOR PRICES and literature on the General 1940 all streamlined refrigerator display case line. Over 40 years experience manufacturing good commercial refrigerators. On a comparative price test with other makes of equal specifications, prices are lowest in the country. GENERAL REFRIGERATOR & STORE FIXTURE CO., 5th & Bainbridge Sts., Philadelphia, Pa.

REPAIR SERVICE

CONTROL REPAIR Service. Domestic controls reconditioned equal to new at a small cost. All work guaranteed for one year. Prices upon request. UNITED SPEEDOMETER REPAIR CO., INC., 342 West 70th Street, New York City.

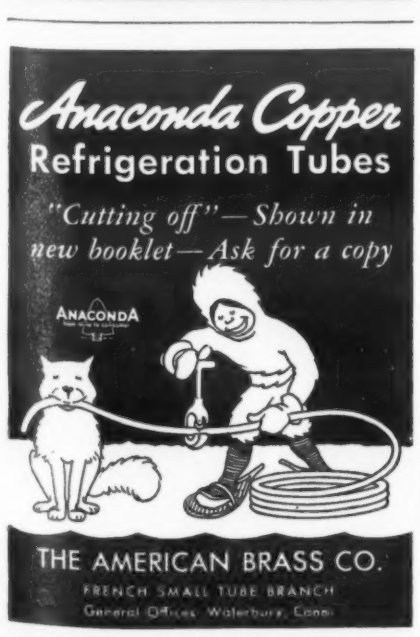
HERMETIC REBUILDING and Exchange Service General Electric—Westinghouse—Majestic and Grunow Units, Compressors and parts. Immediate shipment. Old unit can be returned later in our crate. We also exchange floats, Evaporators, Controls. Write for price list specify S6. SERVICE PARTS CO., 1101-03 N. 24th Ave., Melrose Park, Ill.

GENERAL ELECTRIC monitor top switches exchanged. Send your old switch and receive by return mail completely rebuilt and guaranteed (one year) unit. $3.00 postpaid. NATIONAL ELECTRIC SWITCH CO., 1966 Broadway, New York, N. Y.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

The Machine For Your Next Job...
If it's a refrigeration job ...no matter how big or how small...we can supply Lipman equipment to fit the specifications. Let us work with you.
GENERAL REFRIGERATION DIVISION
Yates-American Machine Co.
Dept. AC-3, Beloit, Wis.
Model 153 Water-cooled Machine
Lipman
GR
AIR CONDITIONING



SNAP-ACTION VALVE
for Multiple Temperature
by Aminco

A marvelous precision valve designed for systems with more than one coil, operated from the same compressor. Any variety of units such as ice cream cabinets, soda fountains, back bars, water coolers, candy counters, beer coils, storage rooms, etc., may be connected to a single compressor unit by the use of Aminco Snap Action Valve.

Adjustable from 20" of vacuum to 63 pounds pressure. Differential 7 lbs. min. to 29 lbs. max. May be used with any refrigerant except ammonia. For flooded as well as dry gas types or any combination of either. Free from bellows strain.

Send for Bulletin No. 17

AMERICAN INJECTOR COMPANY
1481 Fourteenth Avenue DETROIT, MICHIGAN
Pacific Coast: Van D. Clothier, 1015 E. 16th, Los Angeles, Calif.
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.

First in Design - First in Sales for You!
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Patented CROSS-FIN COILS . . . Bare Tube Coils . . . Humi-Temp Forced Convection Units . . . Instantaneous Water Coolers . . . Steel and Copper Vacuum Plate Coils . . . Disseminator Fans . . . Heat Exchangers.
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Originators of The Cross Fin Coil

QUICK SERVICE
Complete stocks of REFRIGERATION and AIR CONDITIONING SUPPLIES and EQUIPMENT
LOW PRICES
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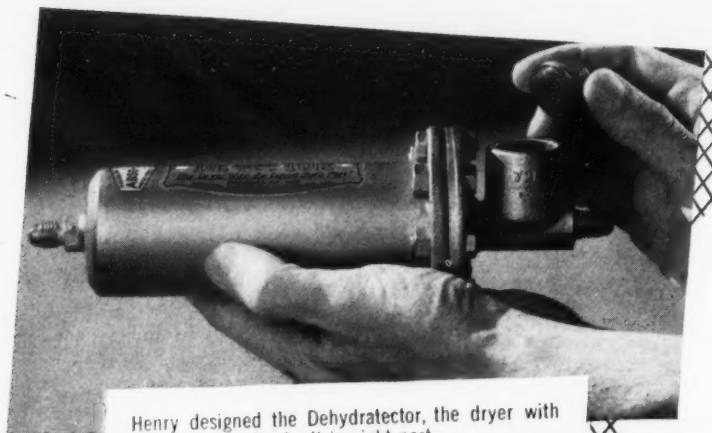
3 CHICAGO BRANCHES, NORTH, WEST, SOUTH
NEW YORK BROOKLYN BRONX JAMAICA
NEWARK DETROIT CLEVELAND ST. LOUIS

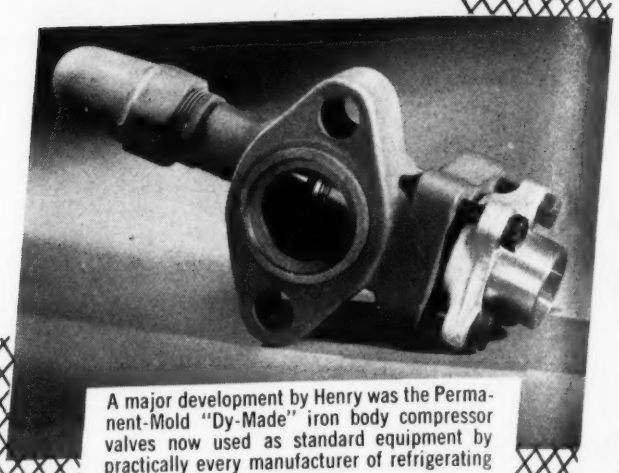
Fan Blades and Blower Wheels
by TORRINGTON

THE TORRINGTON MANUFACTURING CO. of TORRINGTON, CONNECTICUT

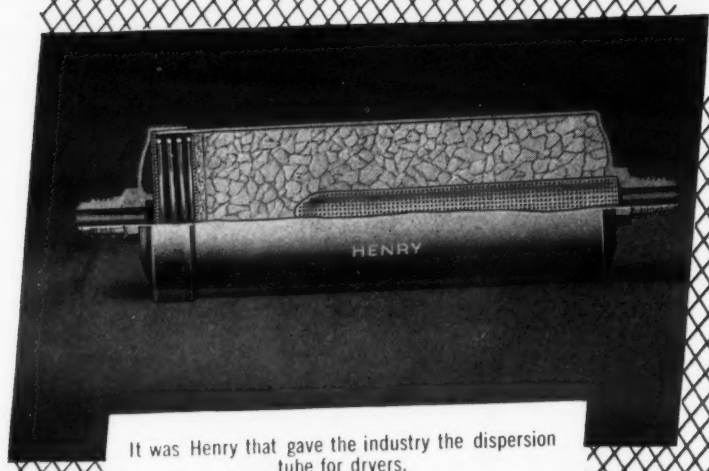


Henry designed the Dehydratector, the dryer with the built-in sight port.

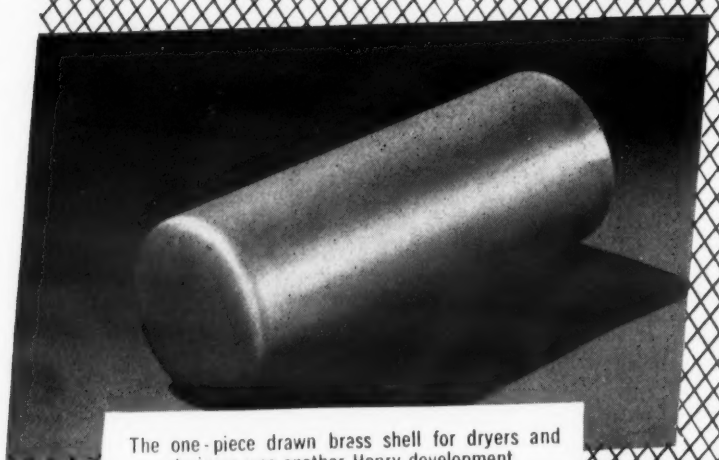
WHO GAVE YOU THESE FEATURES FIRST?



A major development by Henry was the Permanent-Mold "Dy-Made" iron body compressor valves now used as standard equipment by practically every manufacturer of refrigerating equipment.



It was Henry that gave the industry the dispersion tube for dryers.



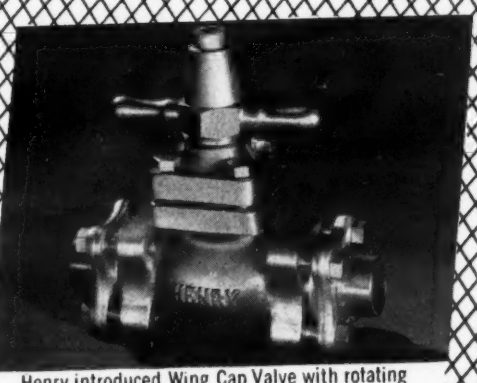
The one-piece drawn brass shell for dryers and strainers was another Henry development.

Henry introduced the Diaphragm Packless Valve with Balanced Action, Ports-in-Line and the Ovaline hand wheel.

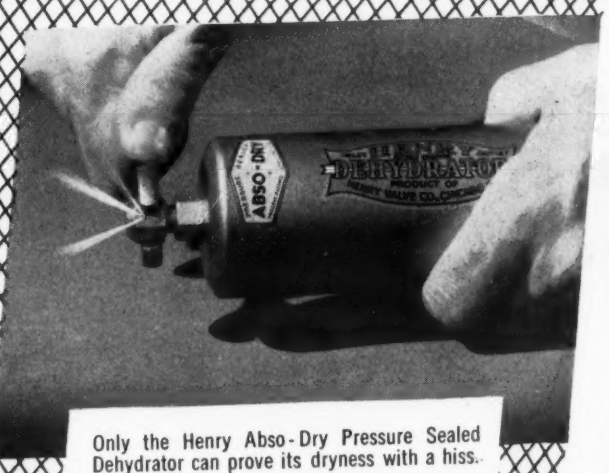
Henry research developed the welded-steel Y-strainer with ports-in-line, minimizing pressure drop.

Henry's patented forged-steel distortion-proof flange makes a tongue and groove recessed gasketed joint with shell.

The automatic pressure relief valve with push rod for emergency reseating was designed by Henry engineers.



Henry introduced Wing Cap Valve with rotating forged steel companion flange and separable brass sleeve, permitting ready alignment—eliminating transmission of soldering heat to internal valve parts. Cap can be inverted and socket used to operate valve.



Only the Henry Abso-Dry Pressure Sealed Dehydrator can prove its dryness with a hiss.

Henry products will always be better!

It is easy enough to live in the past, to relax in the light of yesterday's achievements. It would be easy for us to point to these famous firsts and to stake our future on them. But Henry's achievements of yesterday are only a challenge to the developments of tomorrow. Henry's contributions to the advancement of refrigeration and air conditioning are just a yardstick to measure what Henry will do in the future.

Far-sighted planning; thoro research; engineering skill and vision . . . Henry insists on all these. Henry engineers have a quick grasp of the value of new methods, new materials, new designs, with a sure understanding of their importance to you.

Henry Products are years ahead in engineering and economy. When you use them, you assure yourself of the highest quality, the best performance. You can always expect the best things *first* from Henry.

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